

Address: 222 Euston Road  
London  
NW1 2DA  
United Kingdom  
E-mail: [mhelvens@gmail.com](mailto:mhelvens@gmail.com)

Gender: Male  
Nationality: Dutch  
Marital status: Single  
Birth-date: 26-9-1986  
Personal ID nr.: 196775176  
Website: [www.mhelvens.net](http://www.mhelvens.net)



# Curriculum Vitæ

## Michiel Helvensteijn

### Education

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- 2009 – 2014 • PhD in Computer Science at the CWI and Leiden University
- 2007 – 2009 • Master of Science in Computer Science at Leiden University (*cum laude*)
- 2004 – 2007 • Bachelor of Science in Informatica at Leiden University (*cum laude*)
- 1998 – 2004 • Voorbereidend Wetenschappelijk Onderwijs at Alfrink College Zoetermeer
- 1999 – 2000 • MBO Algemene Ondernemers Vaardigheden at the NHA
- 1997 – 1998 • MBO Praktische Informatiekunde 1 at Stichting Facta

### Professional Experience

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- 2015 – 2017 ◦ Academic Software Engineer at UCL
- 2014 – 2015 • Postdoctoral Researcher & Developer at Leiden University
- 2013 – 2014 • Software Developer at the CWI
- 2012 – 2013 • Research Assistant at Leiden University
- 2009 – 2012 • Research Assistant at the CWI
- 2007 – 2009 • Student Assistant for Jobmotion, Leiden University (see also [Teaching Experience](#))
- 2005 – 2007 • Software Engineer for Carlo Roosen Studio
- 2003 – 2005 • Webdevelopment and Webdesign on freelance basis

### Teaching Experience

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\* notable

- 2013 ★ Lecturer on modern web development for Studievaardigheden at Leiden University
- 2013 ★ Lecturer on Android development for Challenges of Computer Science at Leiden University
- 2012 ★ Lecturer on Android development for Studievaardigheden at Leiden University
- 2011 – 2012 • Teaching Assistant for Programmeren & Correctheid at Leiden University
- 2011 ★ Lecturer on Qt development for Studievaardigheden at Leiden University
- 2010 ★ Teacher of Hoare logic for Programmeren & Correctheid at Leiden University
- 2008 – 2009 • Student Assistant for Challenges in Computer Science Seminar at Leiden University
- 2008 – 2009 • Student Assistant for Programmeren & Correctheid at Leiden University
- 2008 • Student Assistant for Compiler Construction at Leiden University
- 2007 – 2008 • Student Assistant for Programmeermethoden at Leiden University

### Peer-reviewed Publications

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\* notable

- 2016 • B. de Bono, *M. Helvensteijn*, N. Kokash, I. Martorelli, D. Sarwar, S. Islam, P. Grenon, P. Hunter: Requirements for the formal representation of pathophysiology mechanisms by clinicians, in Interface Focus, issue 6:2 [doi](#)
- 2016 • *M. Helvensteijn* and F. Arbab: Toward a Formal Foundation for Time Travel in Stories and Games, a chapter in “Theory and Practice of Formal Methods”, Lecture Notes in Computer Science, pp. 261–276, [doi](#)

## Peer-reviewed Publications

*continued*

- 2015 • M.M. Bonsangue, *M. Helvensteijn*, J.N. Kok and N. Kokash: Action Systems for Pharmacokinetic Modeling, a chapter in “From Action Systems to Distributed Systems: The Refinement Approach”, published by CRC Press [\[www\]](#)
- 2015 • B. de Bono, S. Safaei, P. Grenon, D.P. Nickerson, S. Alexander, *M. Helvensteijn*, J.N. Kok, N. Kokash, A. Wu, T. Yu, P. Hunter and R.A. Baldock: The Open Physiology workflow: modeling processes over physiology circuitboards of interoperable tissue units, in *Frontiers in Physiology* [\[doi\]](#)
- 2014 • B. de Bono, P. Grenon, *M. Helvensteijn*, J. Kok and N. Kokash: ApiNATOMY: The Generation of Interactive Circuitboard Views of Complex Physiology Knowledge, in the Proceedings of the Virtual Physiological Human Conference [\[www\]](#)
- 2014 • B. de Bono, P. Grenon, *M. Helvensteijn*, J. Kok and N. Kokash: ApiNATOMY: Towards Multiscale Views of Human Anatomy, in the Proceedings of the 13th International Symposium on Intelligent Data Analysis, pp. 72–83 [\[doi\]](#)
- 2014 ★ *M. Helvensteijn*: Abstract Delta Modeling: Software Product Lines and Beyond, PhD Thesis, defended in 2014 [\[doi\]](#)
- 2014 • *M. Helvensteijn*: The `pkgloader` and `lt3graph` Packages: Toward simple and powerful package management for L<sup>A</sup>T<sub>E</sub>X, in *TUGboat*, the Communications of the T<sub>E</sub>X Users Group, issue 35:1, 2014 [\[www\]](#)
- 2013 • R. Hähnle, *M. Helvensteijn*, E.B. Johnsen, M. Lienhardt, D. Sangiorgi, I. Schaefer and P. Wong: HATS Abstract Behavioral Specification: The Architectural View, FMCO 2011 postproceedings [\[doi\]](#)
- 2012 • F.S. de Boer, *M. Helvensteijn*, J. Winter: A Modal Logic for Abstract Delta Modeling, in the Proceedings of the 16<sup>th</sup> International Software Product Line Conference - Volume 2, pp. 45–52 [\[doi\]](#)
- 2012 • *M. Helvensteijn*: Dynamic Delta Modeling, in the Proceedings of the 16<sup>th</sup> International Software Product Line Conference - Volume 2, pp. 127–134 [\[doi\]](#)
- 2012 • *M. Helvensteijn*: Abstract Delta Modeling: My Research Plan, in the Proceedings of the 16<sup>th</sup> International Software Product Line Conference - Volume 2, pp. 217–224 [\[doi\]](#)
- 2012 ★ D. Clarke, *M. Helvensteijn*, I. Schaefer: Abstract Delta Modeling, in Mathematical Structures of Computer Science special issue: Objects and Services [\[doi\]](#)
- 2012 • *M. Helvensteijn*: Delta Modeling Workflow, in the Proceedings of the 6<sup>th</sup> international Workshop on Variability Modelling of Software-intensive Systems, pp. 129–137 [\[doi\]](#)
- 2012 • *M. Helvensteijn*, R. Muschevici, P. Wong: Delta Modeling in Practice, a Fredhopper Case Study, in the Proceedings of the 6<sup>th</sup> international Workshop on Variability Modelling of Software-intensive Systems, pp. 139–148 [\[doi\]](#)
- 2010 • D. Clarke, *M. Helvensteijn*, I. Schaefer: Abstract Delta Modeling, in the Proceedings of the 9<sup>th</sup> international conference on Generative Programming and Component Engineering; (ACM SIGPLAN), pp. 13–22 [\[doi\]](#)
- 2008 ★ *M. Helvensteijn*: Applying Data Mining to the Study of Joseki, in *Artificial Intelligence in Theory and Practice II*; (Boston: Springer), pp. 87–96 [\[doi\]](#)

## Awards

- 2013 • 1<sup>st</sup> place at Startup Weekend Enschede 2013 [\[www\]](#)
- 2009 • Cum Laude Master's Degree in Computer Science
- 2007 • Cum Laude Bachelor's Degree in Informatica
- 2005 • Jong Talent Aanmoedigings Prijs ‘Informatica & Technische Informatica’ from the Koninklijke Hollandsche Maatschappij der Wetenschappen [\[www\]](#)

## International Visits

### Conferences

- Apr 2016 • FdB60: Celebration Event – Eindhoven, The Netherlands  
Oct 2014 • 13<sup>th</sup> IDA Conference – Leuven, Belgium

## **International Visits**

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| Oct 2014 | • 1 <sup>st</sup> ng-europe Conference          | – Paris, France              |
| Oct 2013 | • Tissue KM Workshop                            | – Brussels, Belgium          |
| Sep 2012 | • 16 <sup>th</sup> SPLC Conference              | – Salvador, Brazil           |
| Jan 2012 | • 6 <sup>th</sup> VaMoS Workshop                | – Leipzig, Germany           |
| Oct 2010 | • 9 <sup>th</sup> GPCE Conference               | – Eindhoven, The Netherlands |
| Sep 2008 | • IFIP 20 <sup>th</sup> World Computer Congress | – Milan, Italy               |

### *Project Meetings*

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|----------|---------------------------------------|---------------------------|
| Sep 2016 | • CHIC Working Meeting                | – Saarbrücken, Germany    |
| Aug 2014 | • BioJS Hackathon                     | – Munich, Germany         |
| Sep 2011 | • 3 <sup>rd</sup> Annual HATS Meeting | – Oslo, Norway            |
| May 2011 | • HATS Working Meeting                | – Leuven, Belgium         |
| Sep 2010 | • 2 <sup>nd</sup> Annual HATS Meeting | – Kaiserslautern, Germany |
| Aug 2010 | • HATS Working Meeting                | – Oslo, Norway            |
| Oct 2009 | • HATS Working Meeting                | – Leuven, Belgium         |
| Sep 2009 | • 1 <sup>st</sup> Annual HATS Meeting | – Gothenburg, Sweden      |

### *Research Visits*

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|----------|---|----------------------|
| May 2013 | • Visit to Katholieke Universiteit Leuven | – Leuven, Belgium    |
| Dec 2012 | • Visit to Katholieke Universiteit Leuven | – Leuven, Belgium    |
| Jul 2012 | • Visit to the University of Bologna      | – Bologna, Italy     |
| Nov 2010 | • Visit to Katholieke Universiteit Leuven | – Leuven, Belgium    |
| Dec 2009 | • Visit to Chalmers University            | – Gothenburg, Sweden |

### *Research Schools*

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| Aug 2010 | • Marktoberdorf Summer School | – Marktoberdorf, Germany |
| Feb 2010 | • SYANCO Winter School        | – Berlin, Germany        |

## **Refereeing Experience**

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- 2016      • FdB60, Celebration event for Frank de Boer's 60th birthday
- 2015      • Elsevier Journal 'Journal of Logical and Algebraic Methods in Programming'
- 2015      • Elsevier Journal 'Science of Computer Programming'
- 2014      • Elsevier Journal 'Journal of Logical and Algebraic Methods in Programming'
- 2014      • Springer Journal 'Software and Systems Modeling' Special Issue (×2)
- 2013      • HATS International School on Formal Models for Components and Objects Postproceedings
- 2013      • Elsevier Journal 'Science of Computer Programming' Special Issue
- 2012      • 5<sup>th</sup> IPM International Conference on Fundamentals of Software Engineering (×2)
- 2012      • 28<sup>th</sup> Symposium On Applied Computing
- 2012      • 10<sup>th</sup> Conference on Formal Methods for Components and Objects, postproceedings
- 2012      • 14<sup>th</sup> Conference on Coordination Models and Languages (×2)
- 2011      • 27<sup>th</sup> Symposium On Applied Computing
- 2011      • 2<sup>nd</sup> International Conference on Formal Verification of Object-Oriented Software (×2)
- 2011      • 8<sup>th</sup> International Symposium on Formal Aspects of Component Software
- 2011      • 2<sup>nd</sup> International Conference on Complex Systems Design & Management
- 2011      • 15<sup>th</sup> CSI International Symposium on Computer Science and Software Engineering
- 2011      • 4<sup>th</sup> IPM International Conference on Fundamentals of Software Engineering
- 2010      • 8<sup>th</sup> IEEE International Conference on Software Engineering and Formal Methods
- 2009      • 7<sup>th</sup> IEEE International Conference on Software Engineering and Formal Methods

## European Projects

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- 2014 – 2016 • DDMoRe: The Drug Disease Model Resources consortium, supported through the IMI by the 7<sup>th</sup> Framework Programme of the EC and the EFPIA [www](#)
- 2009 – 2013 • HATS: Highly Adaptable and Trustworthy Software using Formal Models, supported by the 7<sup>th</sup> Framework Programme of the EC within the FET scheme [www](#)

## Miscellaneous Academic Activities

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- 2013 • Initiation / organization of a weekly group meeting for the FM research group at the CWI
- 2012 • Local organization for the 6<sup>th</sup> IFIP International Conference on Theoretical Computer Science
- 2011 – 2012 • Organization of the biweekly ACG colloquium at the CWI
- 2010 – 2012 • Organization of three separate peer-reviewed deliverables for the HATS project

## Followed Courses

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- Nov 2012 • ‘Writing an Excellent Research Grant Proposal’ at Leiden University
- Oct 2012 • ‘Intellectual Property’ at Leiden University
- Oct 2012 • ‘The Art of Presenting Science’ at the CWI
- Feb 2012 • ‘Effective Communication’ at Leiden University
- Feb 2012 • ‘Time Management and Personal Efficiency’ at the CWI
- Nov 2011 • ICT.OPEN: an IPA Research School event
- Oct 2011 • ‘Write it Right’ at the CWI
- Apr 2011 • IPA Lentedagen: an IPA Research School event
- Nov 2010 • IPA Herfstdagen: an IPA Research School event
- Apr 2010 • IPA Lentedagen: an IPA Research School event

## Personal Projects

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- 2014 – ... • `delta.js`: an implementation of delta modeling for JavaScript [www](#)
- 2014 – ... • `graph.js`: a graph datastructure for JavaScript [www](#)
- 2014 – ... • `pkgloader`: a L<sup>A</sup>T<sub>E</sub>X package for managing the options and loading order of packages [www](#)
- 2014 – ... • `delta-modules`: an implementation of delta modeling for the L<sup>A</sup>T<sub>E</sub>X language [www](#)
- 2013 – ... • `lt3graph`: a graph datastructure for the L<sup>A</sup>T<sub>E</sub>X3 programming environment [www](#)
- 2013 – 2014 • Talescape: Experiencing and sharing interactive audible augmented reality [www](#)
- 2013 – ... • `underoverlap`: a L<sup>A</sup>T<sub>E</sub>X construct for partly overlapping math decorations [www](#)
- 2012 – ... • `withargs`: a L<sup>A</sup>T<sub>E</sub>X construct for locally passing token-lists as #i arguments [www](#)
- 2012 – 2013 • `concepts`: a L<sup>A</sup>T<sub>E</sub>X package for keeping track of formal concepts in scientific papers [www](#)
- 2011 – ... • Delta Profiles: a smart, modular profile manager for Android based on Delta Modeling [www](#)
- 2008 – ... • Mist, the programming language: the design of a high level programming language [www](#)