

# Riemer van Rozen

Research Scientist, Senior Lecturer and Software Engineer

*Curriculum Vitae* – February 2025

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## Education

### University of Amsterdam

*Feb. 2020*

Ph.D. in Software Engineering, Faculty of Science, Informatics Institute, University of Amsterdam, Amsterdam, The Netherlands.

### University of Twente

*Nov. 2007*

M.Sc. in Technical Computer Science, University of Twente, Enschede, The Netherlands.

## Grants

### DGA Fieldlab

*Oct. 2019*

Prototyping tools for digital card game design. Funding awarded by the Dutch Games Association and ClickNL.

### RAAK-MKB

*Mar. 2016*

Live Game Design: Live intelligent visual environments for game design. Funding awarded by NWO/SIA.

### Leonardo da Vinci

*Jun. 2005*

Detecting loops in NuSMV counter-examples. Personal grant awarded by the European Commission.

## Career Objectives

Experienced scientist with a passion for programming languages, higher education and applied research. Committed to making programming: “*more fun, visual and for everyone*”. His main goals, focus topics and impact areas are:

- **Programming Languages.** Develop better programming languages by introducing input and feedback mechanisms that enable live programming.
- **Automated Game Design.** Accelerate game design processes by providing tools and game AI techniques for creating better games more quickly.
- **Game-Based Learning.** Empower non-programmer experts, novices and children by combining play with tools and tutorials that bring code to life.

## Experience

### Centrum Wiskunde & Informatica

- **Research Scientist**

*Aug. 2020 – Present*

Researcher in the Software Analysis & Transformation (SWAT) group.

- **PhD Candidate**

*May 2011 – February 2020*

PhD candidate in the SWAT group. Dissertation: Riemer van Rozen. “Languages of Games and Play: Automating Game Design & Enabling Live Programming”. PhD Thesis. University of Amsterdam, Feb. 2020. Promotor: Prof. Dr. Paul Klint. Copromotor: Prof. Dr. Tijs van der Storm.

### University of Amsterdam

- **Master’s Supervisor**

*Nov. 2016 – Present*

Master’s project supervisor and second reader in the Master of Software Engineering.

- **University Lecturer**

*Nov. 2016 – Nov. 2021*

Lecturer and module coordinator of the course Software Evolution in the Master of Software Engineering.

### Amsterdam University of Applied Sciences

- **Lecturer / Researcher**

*May 2011 – Aug. 2020*

Researcher at the research institute CREATE-IT Applied Research, Play and Civic Media group. Lecturer at the Faculty of Digital Media and Creative Industries, Department of Informatics, in the Software Engineering and Game Development groups.

## Experience (cont.)

### Amsterdam University of Applied Sciences

- **Principal Investigator – Digital Card Game Prototyping**

*Dec. 2019 – Aug. 2020*

Principal investigator in the Dutch Games Association Field Lab on Digital Card Game Prototyping. Delivered languages, techniques and tools for rapid card game prototyping.

- **Project Leader and Principal Investigator – Live Game Design**

*May 2016 – Mar. 2019*

Project leader and principal investigator of the Live Game Design (LGD-RAAK-MKB) project. Managed the project and delivered visual languages and tools that accelerate game design through live programming.

- **Researcher – Automated Game Design**

*Feb. 2015 – Nov. 2015*

Researcher in the project Automated Game Design (AGD-RAAK-MKB). Developed languages, techniques and tools that help speed-up game development by automating the game design process.

- **Researcher – Early Quality Assurance in Software Production**

*May 2011 – Feb. 2015*

Researcher in the project Early Quality Assurance in Software Production (EQuA-RAAK-PRO). Developed languages, techniques and tools that improve the productivity of game developers and raise the game quality.

### EchoStar Corporation

- **Embedded Software Engineer**

*Jun. 2010 – Apr. 2011*

Embedded Software Engineer at the department of Software Engineering at EchoStar Europe, Almelo, the Netherlands. Responsible for the development of Service Oriented Architectures for digital television and IP-TV, including interfaces for remote user assistance and test automation for Set Top Boxes.

- **Software Engineer for Test Automation**

*Nov. 2008 – Jul. 2010*

Software Engineer at the department of European Test Organization at EchoStar Europe, Almelo, the Netherlands. Responsible for test automation, and the development of the Gray Box toolset and test infrastructure.

### Freelance Software Developer

- **Software Developer**

*Nov. 2007 – Jul. 2010*

Developed customized software solutions, including tooling for the analysis of Dutch parishes.

### University of Twente

- **Teaching Assistant Compiler Engineering**

*2003 – 2006*

Teaching Assistant of Dr. ir. Theo Ruys at the department of Computer Science, University of Twente, Enschede, the Netherlands. Supervised practical sessions and graded course assignments.

### Istituto Trentino di Cultura

- **Research Intern**

*Sep 2005 – Nov 2005*

Research Intern at the Automated Reasoning group, Center for Scientific and Technological Research, Istituto Trentino di Cultura, Trento, Italy. Supervisors: Dr. Mariëlle Stoelinga and Dr. Alessandro Cimatti.

## Publications

### Journal Articles

- Jean-Baptiste Döderlein, Riemer van Rozen, and Tijs van der Storm. “LiveRec: Prototyping Probes by Framing Debug Protocols”. In: *The Art, Science, and Engineering of Programming* 8 (3 2024)
- Riemer van Rozen. “Languages of Games and Play: A Systematic Mapping Study”. In: *ACM Computing Surveys* 53.6 (Dec. 2020)
- Riemer van Rozen and Tijs van der Storm. “Toward Live Domain-Specific Languages: From Text Differencing to Adapting Models at Run Time”. In: *Software & Systems Modeling* 18.1 (Feb. 2019)

### Conference Papers

- Riemer van Rozen. “Live Game Design: Prototyping at the Speed of Play”. In: *Proceedings of the International Conference on the Foundations of Digital Games, FDG 2025*. To appear. ACM, 2025
- Riemer van Rozen. “Cascade: A Meta-Language for Change, Cause and Effect”. In: *Proceedings of the International Conference on Software Language Engineering*. ACM, 2023
- Riemer van Rozen, Anders Bouwer, and Karel Millenaar. “Towards a Unified Language for Card Game Design”. In: *Proceedings of the International Conference on the Foundations of Digital Games*. ACM, 2023
- Clement Julia and Riemer van Rozen. “ScriptButler serves an Empirical Study of PuzzleScript”. In: *Proceedings of the International Conference on the Foundations of Digital Games*. ACM, 2023
- Riemer van Rozen and Tijs van der Storm. “Origin Tracking + Text Differencing = Textual Model Differencing”. In: *Theory and Practice of Model Transformations*. Vol. 9152. LNCS. Springer, 2015
- Riemer van Rozen. “A Pattern-Based Game Mechanics Design Assistant”. In: *Proceedings of the International Conference on the Foundations of Digital Games*. SASDG, 2015
- Riemer van Rozen and Joris Dormans. “Adapting Game Mechanics with Micro-Machinations”. In: *Proceedings of the International Conference on the Foundations of Digital Games*. SASDG, 2014
- Paul Klint and Riemer van Rozen. “Micro-Machinations: a DSL for Game Economies”. In: *Proceedings of the International Conference on Software Language Engineering*. Vol. 8225. LNCS. Springer, 2013

### Workshop Papers

- Elisabeth Kletsco and Riemer van Rozen. “Advanced Game Engine Wizardry for Visual Programming Environments”. In: *Proceedings of the Workshop on Programming Abstractions and Interactive Notations, Tools, and Environments, PAINT*. ACM, 2024
- Dennis Vet and Riemer van Rozen. “The Puzzle Forecast: Tutorial Analytics Predict Trial and Error”. In: *Proceedings of the International Conference on the Foundations of Digital Games, FDG 2024 – as part of the Workshop on Procedural Content Generation, PCG 2024*. ACM, 2024
- Riemer van Rozen. “Game Engine Wizardry for Programming Mischief”. In: *Proceedings of the Workshop on Programming Abstractions and Interactive Notations, Tools, and Environments, PAINT*. ACM, 2023
- Riemer van Rozen, Georgia Samaritaki, and Joris Dormans. “Debugging Procedural Level Designs with Mental Maps”. In: *Proceedings of the International Conference on the Foundations of Digital Games, FDG 2022, – as part of the Workshop on Procedural Content Generation, PCG 2022*. ACM, 2022
- Riemer van Rozen. “Cascade: A Meta-Language for Change Cause and Effect”. In: *Workshop on Live Programming, LIVE 2022*. Note: An extended version of this paper appears in SLE 2023. [liveprog.org](https://liveprog.org), 2022
- Riemer van Rozen, Youri Reijne, Clement Julia, and Georgia Samaritaki. “First-Person Realtime Collaborative Metaprogramming Adventures”. In: *Joint Proceedings of the AIIDE 2021 Workshops – as part of the 1st Workshop on Programming Languages and Interactive Entertainment, PLIE*. vol. 3217. CEUR WS. 2021
- Riemer van Rozen and Quinten Heijn. “Measuring Quality of Grammars for Procedural Level Generation”. In: *Proceedings of the International Conference on Foundations of Digital Games, FDG 2018 – as part of the Workshop on Procedural Content Generation, PCG 2018*. ACM, 2018

- Rosa Corstjens, Anders Bouwer, Joris Dormans, and Riemer van Rozen. “Wonderful Design: Applying Appraisal Theory to Procedural Level Generation”. In: *Joint Proceedings of the AIIDE 2018 Workshops – as part of the Workshop on Experimental AI in Games, EXAG 2018*. Vol. 2282. CEUR WS. 2018
- Riemer van Rozen, Paul Sottosanti, Joris Dormans, and Mike Treanor. “A Note on Depth of Game Rules”. In: *BIRS Workshop on Computational Modeling in Games, May 15–20 2016, Banff International Research Station, Banff, Canada*. Technical report. 2016
- Riemer van Rozen and Tijs van der Storm. “Model Differencing for Textual DSLs”. In: *Software Evolution in Belgium and the Netherlands, BENEVOL 2014*. CWI, 2014. URL: <http://benevol.cwi.nl/2014/>
- Paul Klint, Loren Roosendaal, and Riemer van Rozen. “Game Developers Need Lua AiR: Static Analysis of Lua Using Interface Models”. In: *Entertainment Computing – as part of the 2nd Workshop on Game Development and Model-Driven Software Development, GD&MDSD*. vol. 7522. LNCS. Springer, 2012

## Theses

- Riemer van Rozen. “Languages of Games and Play: Automating Game Design & Enabling Live Programming”. PhD Thesis. University of Amsterdam, Feb. 2020
- Riemer van Rozen. “A Debugging Framework for NIPS”. M.Sc. Thesis. University of Twente, Oct. 2007

## Patents

The following patents were filed as part of R&D activities at EchoStar Europe, Almelo, The Netherlands.

- Riemer van Rozen and David Bonfrer. *Distributed System Architecture for Control of a Set Top Box*. US Patent 9,854,296 – Grant. Filed Dec 15th 2011 – Issued Dec 26nd 2017
- Riemer van Rozen. *Embedding Dynamic Information in Electronic Devices*. US Patent 9,342,435 – Grant. Filed Oct 27th 2010 – Issued May 17th 2016
- Dennis Engbers, Peter Hillen, Menno de Jong, Riemer van Rozen, and Harmen Bekedam. *Dynamically Determining and Utilizing an Application Programming Interface of an Electronic Device*. US Patent 9,374,441 – Filed October 8th 2010 – Granted June 21st 2016
- Harmen Bekedam, Menno De Jong, and Riemer van Rozen. *Monitoring and Controlling the Operation of Devices in a Distributed Network of Broadcast Devices*. US Patent 9,218,265 – Grant. Filed Feb 22nd 2011 – Issued Dec 22nd 2015
- Riemer van Rozen. *Embedding Dynamic Information in Electronic Devices*. European Patent Office – EP2494442A1 – App. Filed Oct 27th 2010 – Published Sep 5th 2012

## Dissemination

- Riemer van Rozen. “Betere Games met Live Programmeren”. In: *AG Connect* (Apr. 2020)
- Interview. Robin van Wechem. “Spelontwerp is zo intrinsiek complex dat je het maar ten dele kunt automatiseren”. In: *SPUI – UvA Alumni Magazine* 52 (Jan. 2020)

## Software and Tools

The following programming languages, software libraries, game AI techniques, and tools are released as open source software.

- Riemer van Rozen. *Vie v0.0.6*. A visual live programming environment for simultaneously prototyping and play testing a game’s rules. Combines automated game design and game-based learning. Released under 2-clause BSD license. Oct. 2024. URL: <https://vrozen.github.io/Vie>
- Riemer van Rozen. *Cascade*. Generic language technology for creating interpreters that drive live programming environments. The framework includes a compiler developed in Rascal and a C# runtime. Both are released under the 2-clause BSD license. 2023. URL: <https://github.com/vrozen/Cascade>

- Riemer van Rozen. *Card Deck Generator*. Example tool that demonstrates a toolset approach for CardScript, a unified language for card game design. Developed in Rascal and released under 2-clause BSD license. 2023. URL: <https://github.com/vrozen/CardScript>
- Clement Julia and Riemer van Rozen. *ScriptButler*. Framework for analyzing PuzzleScript games. Developed in Rascal and released under the 2-clause BSD license. 2023. URL: <https://github.com/vrozen/ScriptButler>
- Quinten Heijn and Riemer van Rozen. *LudoScope Lite*. A tool that demonstrates the Metric of Added Detail (MAD) and Specification Analysis Reporting (SAnR). Both are developed in Rascal and released under the Eclipse license. Aug. 2018. URL: <https://github.com/visknut/LudoscopeLite>
- Riemer van Rozen. *MeDeA*. Mechanics Design Assistant is a tool for pattern-based game design. Developed in Rascal, it is released under the Eclipse license. 2015. URL: <https://github.com/vrozen/MeDeA>
- Tijs van der Storm and Riemer van Rozen. *TMDiff and RMPatch*. Textual Model Differencing and Run-time Model Patching are reusable algorithms developed in Rascal and released under the Eclipse license. 2015. URL: <https://github.com/cwi-swat/textual-model-diff>
- Riemer van Rozen. *MM Lib*. Micro-Machinations Library is a C++ software library for modifying a game's mechanisms at run time. Released under the 3-Clause BSD License. 2014. URL: <https://github.com/vrozen/MM-Lib>
- Riemer van Rozen. *MM AiR*. Micro-Machinations Analysis in Rascal is a framework and Rascal software library released under the Eclipse license. 2013. URL: <https://github.com/vrozen/MM-AiR>

The following programming languages, software libraries and tools are work in progress.

- Riemer van Rozen and Linus Wagner. *Lua AiR*. Lua Analysis in Rascal framework. Originally started in 2011 as part of the EQuA project, it is now part of Rascal's research infrastructure. To be released. 2025

## Teaching

The following teaching activities have taken place at the Amsterdam University of Applied Sciences (AUAS), the University of Amsterdam (UvA), and the University of Twente (UT).

- Module Coordinator and Lecturer Software Evolution, Master of Software Engineering, UvA. 2016–2021
- Course Developer of Software Design, Informatics Department, AUAS. 2019–2020
- Coordinator and Lecturer Object Oriented Analysis & Design, Informatics Department, AUAS. 2011–2017
- Lecturer C++, Software Engineering and Game Development, Informatics Department, AUAS. 2013–2016
- Guest Lecturer Automated Game Design, Informatics Department, AUAS. 2015–2019
- Lecturer and Lab Teacher Object Oriented Programming 1, Informatics Department, AUAS. 2011–2016
- Lecturer and Lab Teacher Object Oriented Programming 2, Informatics Department, AUAS. 2011–2016
- Lecturer and Lab Teacher Object Oriented Programming 1, Make IT Work, AUAS, 2015–2016
- Lecturer and Lab Teacher Project Game Technology, Informatics Department, AUAS. 2012–2014
- Practical Lab Teacher Project Fasten Your Seatbelts, Informatics Department, AUAS 2014–2015
- Lecturer and Practical Lab Teacher Programming Principles, Informatics Department, AUAS. 2011–2013
- Practical Lab Teacher, Project Outfit, Informatics Department, AUAS 2011–2013
- Lecturer Introduction to Software Engineering, Informatics Department, AUAS. 2011–2013
- Teaching Assistant Compiler Engineering, Department of Computer Science, UT. 2003–2006

## Lectures, Appearances and Invited Talks

- Riemer van Rozen. “Programming Languages and Games”. In: *IPA Fall Days on Models for Constructing Software, November 4—8 2024, Center Parcs, Zandvoort, The Netherlands*. Invited talk. 2024

- Riemer van Rozen and Daria Protsenko. “Zelf Leuke Spelregels Ontwerpen”. In: *CWI Open Dag, Weekend van de Wetenschap, 5 Oktober 2024*. Lecture, demo and workshop. 2024
- Riemer van Rozen. “Vie is a Game Changer: Programming Languages Meets Game-Based Learning”. In: *4th VERSEN Workshop on Programming Languages in the Netherlands (PLNL), June 21st 2024, Bernoulliborg, University of Groningen, The Netherlands*. Talk. 2024
- Elisabeth Kletsco and Riemer van Rozen. “It’s RASCALing – Using Game Engines to Rapidly Prototype Visual Programming Environments”. In: *4th VERSEN Workshop on Programming Languages in the Netherlands (PLNL), June 21st 2024, Bernoulliborg, University of Groningen, The Netherlands*. Talk. 2024
- Riemer van Rozen. “Vie is a Game Changer: Programming Languages Meets Game-Based Learning”. In: *The 10th Dutch National Symposium on Software Engineering (SEN), June 7th 2024, CWI, Amsterdam, The Netherlands*. Short talk. 2024
- Riemer van Rozen. “A Live Programming Tutorial that uses Game-Based Learning”. In: *ICT.Open, April 10–11 2024, Jaarbeurs, Utrecht, The Netherlands*. Demo. Nominated for best demo award. 2024
- Riemer van Rozen. “Game-Based Learning through Game Design and Live Programming”. In: *Game-Based Learning Meetup, April 3rd 2024, Amsterdam University of Applied Sciences, Amsterdam, The Netherlands*. Invited Talk. 2024
- Anders Bouwer, Daan van Smaalen, and Riemer van Rozen. “Games Ontwerpen voor je Onderwijs”. In: *ACTIEFFABRIEK, March 21st 2024, Benno Premselahuis, Amsterdam University of Applied Sciences, Amsterdam, The Netherlands*. Workshop. 2024
- Riemer van Rozen. “Towards an Omniscient Debugger for Change-Based DSLs”. In: *Agile Language Engineering, ALE, Inria CWI Associate Team, December 18–19, 2023, Inria, Rennes, France*. Invited talk. 2023
- Riemer van Rozen. “Enabling Technology for Live Programming”. In: *Language Developer’s Meetup (LangDev), November 14–15 2023, Dutch Tax Authority, Rijkskantoor de Knoop, Utrecht, The Netherlands*. Lecture. 2023
- Riemer van Rozen. “Zelf Leuke Spelregels Ontwerpen”. In: *CWI Open Dag, Weekend van de Wetenschap, October 7th 2023, Amsterdam, The Netherlands*. Lecture, demo and workshop. 2023
- Riemer van Rozen. “Putting the PL in GamePlay”. In: *3rd VERSEN Workshop on Programming Languages in the Netherlands (PLNL), June 16th 2023, Doelenzaal, University of Amsterdam, Amsterdam, The Netherlands*. Lecture. 2023
- Riemer van Rozen. “Live Programming requires Enabling Technology”. In: *ICT.Open, April 19–20 2023, Jaarbeurs, Utrecht, The Netherlands*. Poster. 2023
- Riemer van Rozen, Anders Bouwer, and Karel Millenaar. “Towards a Unified Language for Card Game Design”. In: *Foundations of Digital Games, April 11–14 2023, Lisbon, Portugal*. Poster. 2023
- Riemer van Rozen. “Live Programming makes Code come Alive”. In: *11th Student Congress on Awesome IT, May 12th 2023, LAB42, University of Amsterdam, Amsterdam, The Netherlands*. Lecture. 2023
- Riemer van Rozen. “Live Programming Requires Enabling Technology”. In: *Strumenta Virtual Meetup, March 21st, 2023*. Invited talk. 2023
- Riemer van Rozen. “TEL: A DSL for Defining Live Modeling Languages”. In: *Agile Language Engineering, ALE, Inria CWI Associate Team, May 23–25, 2022, Inria, Rennes, France*. Invited talk. 2022
- Riemer van Rozen. “Languages of Games & Play: A Systematic Mapping Study”. In: *9th Student Congress on Awesome IT, April 9th 2021, University of Amsterdam, Amsterdam, The Netherlands*. Online lecture. 2021
- Riemer van Rozen. “Supporting Technology for Live Modeling”. In: *Symposium on Live Game Design, February 27th, 2019, Volkshotel, Amsterdam, The Netherlands*. Invited talk. 2019
- Riemer van Rozen. “Languages of Games and Play: A Systematic Mapping Study”. In: *Symposium on Live Game Design, February 27th, 2019, Volkshotel, Amsterdam, The Netherlands*. Invited talk. 2019
- Riemer van Rozen. “Towards Live Domain-Specific Languages”. In: *IPA Fall Days on Models in Software Engineering, November 2nd 2018, WestCord Hotel de Veluwe, Garderen, The Netherlands*. Lecture. 2018
- Riemer van Rozen and Tijs van der Storm. “Towards Live Domain-Specific Languages”. In: *Agile Language Engineering, ALE, Inria CWI Associate Team, March 27–28, 2017, Inria, Rennes, France*. Invited talk. 2017

- Riemer van Rozen. “Live Game Design”. In: *The Dutch National Symposium of Software Engineering (SEN 2016), January 21st 2016, CWI, Amsterdam, The Netherlands*. Poster. 2016
- Riemer van Rozen. “Live Domain-Specific Languages”. In: *The Dutch National Symposium of Software Engineering (SEN 2016), January 21st 2016, CWI, Amsterdam, The Netherlands*. Poster. 2016
- Riemer van Rozen. “Live Adaptation of Games with Micro-Machinations Case study with IC3D Media”. In: *Symposium on Automated Game Design, July 8th 2015, Volkshotel, Amsterdam, The Netherlands*. 2015
- Riemer van Rozen, Daniel Karavolos, and Stefan Leijnen. “Tools for Adapting Game Mechanics and Mixed-Initiative Level Design”. In: *Symposium on What’s Next for Procedural Content Generation (WNFPCG), November 10–11 2014, IT University of Copenhagen, Copenhagen, Denmark*. Invited talk. 2014
- Loren Roosendaal and Riemer van Rozen. “Live Game Software Verbeteren”. In: *Symposium on Early Quality Assurance in Software Production (EQuA), November 21st 2014, Fontys University of Applied Sciences, Eindhoven, The Netherlands*. Invited talk. 2014
- Riemer van Rozen. “Interactive Workshop on Adapting Game Mechanics with Micro-Machinations”. In: *Symposium on Automated Game Design, Sept. 17th 2014, Hotel Casa, Amsterdam, The Netherlands*. 2014
- Riemer van Rozen. “Taaltechnologie voor Betere Game Software”. In: *Symposium on Early Quality Assurance in Software Production (EQuA), July 26th 2013, Fontys University of Applied Sciences, Eindhoven, The Netherlands*. Invited talk. 2013
- Riemer van Rozen. “Static Analysis of Lua”. In: *CWI Lectures on Understanding Software, June 14th 2012, CWI, Amsterdam, The Netherlands*. Poster. 2012

## Academic Service

- Organizer of the PEM/SEM Colloquium, CWI SWAT group, 2022—present.
- Co-organizer with Damian Frölich of The 5th VERSEN Workshop on Programming Languages in The Netherlands, PLNL 2025.
- Co-organizer with Daria (Dasha) Protsenko of the 1st Workshop on Live Game Design (LGD 2025), April 15th 2025, co-located with the 19th International Conference on the Foundations of Digital Games (FDG 2025), April 15–18 2025, Vienna and Graz.
- PC Member of the Game AI track of the ACM International Conference on the Foundations of Digital Games, FDG 2025.
- PC Member of the Workshop on Procedural Content Generation, PCG 2025.
- Reviewer for Elsevier Science of Computer Programming, 2025.
- PC Member of the ACM SIGPLAN International Conference on Software Language Engineering, SLE 2024.
- PC Member of the ACM SIGPLAN International Workshop on Programming Abstractions and Interactive Notations, Tools, and Environments, PAINT 2024.
- PC Member of the AAAI Conference on Artificial Intelligence and Interactive Digital Entertainment, AIIDE 2024.
- Proceedings Chair, ACM International Conference on the Foundations of Digital Games, FDG 2024.
- Reviewer for ACM International Conference on the Foundations of Digital Games, FDG 2024.
- PC Member of the Workshop on Procedural Content Generation, PCG 2024.
- Reviewer for PeerJ Computer Science, 2024.
- Session Chair of the Financial track at The Future of Cobol and Mainframe in The Netherlands, January 18th 2024, CWI, Amsterdam, The Netherlands.
- Reviewer for Elsevier Science of Computer Programming, 2024.
- Session Chair of the Beyond Programming track, Onward! 2023, October 25–26 2023, Cascais, Portugal.
- Reviewer for ACM SIGPLAN International Symposium on New Ideas, New Paradigms, and Reflections on Programming and Software!, Onward! 2023.

- PC Member, Workshop on Procedural Content Generation, PCG 2023.
- Reviewer for the ACM Conference on Generative Programming: Concepts & Experiences, GPCE 2022.
- PC Member, Workshop on Procedural Content Generation, PCG 2022.
- Reviewer for PeerJ Computer Science, 2022.
- Co-Chair and Co-organizer with Asiih Song and Konstantinos Sfikas. Workshop on Procedural Content Generation, PCG 2022, September 5th 2022, Athens, Greece.
- Reviewer for Elsevier Multimedia Tools and Applications, 2021.
- Reviewer for IEEE Transactions on Games, 2020.
- Organizer of the Symposium on Live Game Design, January 28, 2020, Hotel Casa, Amsterdam, NL.
- Organizer PhD Support Group, Amsterdam University of Applied Sciences, 2013—2020.
- Co-organizer with Anders Bouwer of the Symposium on Live Game Design, February 27th 2019, Volkshotel, Amsterdam, the Netherlands.
- PC Member, Tech Demo track, International Conference on the Foundations of Digital Games, FDG 2017.
- Reviewer, Joint Conference on Serious Games, JCSG 2016.
- Co-organizer with Anders Bouwer and Stefan Leijnen. Symposium on Live Game Design, October 7th 2016, Hotel Casa 400, Amsterdam, the Netherlands.
- Co-organizer with Anders Bouwer and Stefan Leijnen. Symposium on Live Game Design, June 29th 2016, Centrum Wiskunde & Informatica, Amsterdam, the Netherlands.

## Student Supervision

The following students are currently performing a Master's project under my supervision. Please note these are the working titles of their Master's projects.

- Daria Protsenko. "Mental Maps: Bridging the Gap Between Design Sketches and Generated Game Levels". Ongoing project. Master's thesis. University of Amsterdam, 2025
- Dylan Kroon. "Generating Personalized Puzzle Tutorials for Teaching Propositional Logic". Ongoing project. Master's thesis. University of Amsterdam, 2025
- Jakub Stanisław Kaşikci. "Omniscient Debugging for Live and Exploratory Programming with Cause-and-Effect". Ongoing project. Master's thesis. University of Amsterdam, 2025

The following students of the Master of Software Engineering at the University of Amsterdam have completed their Master's thesis under my supervision.

- Borja Velasco Santamaría. "Echoes of the Labyrinth: Generating Puzzle Tutorial Levels and Solutions through Verb-Enriched Playtraces". Cum laude. Master's thesis. University of Amsterdam, Aug. 2024
- Elisabeth Kletsko. "Leveraging Game Engines for the Creation of Visual Programming Environments". Cum laude. Master's thesis. University of Amsterdam, Aug. 2024
- Linus Wagner. "Mapper: Cross-Language Call-Graph Analysis for C++, Lua and XML at MA Lighting Technology". Cum Laude. Co-supervised with Jurgen Vinju. Master's thesis. University of Amsterdam and Vrije Universiteit, May 2024
- Dennis Vet. "Tutomate: Relating Skill Atoms to Playtraces for Enabling Automated Analysis of Game Tutorials". Cum laude. Master's thesis. University of Amsterdam, Nov. 2023
- Georgia Samaritaki. "Debugging Grammars for Level Generation". Cum laude. Master's thesis. University of Amsterdam, Feb. 2022
- Cemenent Julia. "Leveraging meta-programming principles to facilitate the software evolution of video games: Using Rascal to analyse PuzzleScript games". Master's thesis. University of Amsterdam, Feb. 2022
- Youri Reijne. "LINCO-PUVI Framework: Live Interactive Code Puzzle Visualisation". Cum laude. Master's thesis. University of Amsterdam, Dec. 2021



- Andrea van den Hooff. “Researching Hanabi with CardScript: Analysing the Rules of Collaborative Card Games”. Master’s thesis. University of Amsterdam, Dec. 2019
- Quinten Heijn. “Improving the Quality of Grammars for Procedural Level Generation: A Software Evolution Perspective”. Master’s Thesis. University of Amsterdam, Aug. 2018

The following Bachelor students have completed their projects with my feedback and technical advise. These projects are collaborations with Anders Bouwer, Karel Millenaar, and the Dutch game industry.

- Maxim Petrov. “Towards an Integrated Toolkit for Card Game Design”. Bachelor’s Thesis. Amsterdam University of Applied Sciences, 2023
- Midas Buitink. “Card Game Toolkit: Het Verbeteren van de Workflow in de Initiële Ontwerpfase van een Kaartspel”. Bachelor’s Thesis. Amsterdam University of Applied Sciences, 2020
- Naomi Vogelpoel. “Detecting plot holes in visual novel type games: A visual novel definition language and its application in detecting plot holes”. Cum laude. Bachelor’s thesis. Amsterdam University of Applied Sciences, Department of Informatics, Game Development, 2019
- Mauro Vermeulen. “Automated Game Generation Met Gebruik Van Meta-Programming: Automatische generatie van games in de open source programmeertaal PuzzleScript met gebruik van de Meta Programmeertaal Rascal”. Bachelor’s Thesis. Amsterdam University of Applied Sciences, Department of Informatics, 2018
- Rosa Corstjens. “Emotion in Procedural Level Generation: A design pattern language for emotion in level design and its application in procedural content generation”. Bachelor’s Thesis. Amsterdam University of Applied Sciences, Department of Informatics, Game Development, 2018
- Ferdy van den Hoed. *A Visual Modelling Tool for Micro-Machinations*. Tech. rep. Game Technology Internship Research Report. Amsterdam University of Applied Sciences, Department of Informatics, 2018
- Christian Stiehl. “LIVE Game Design for Money Maker Deluxe”. Bachelor’s Thesis. Amsterdam University of Applied Sciences, Department of Informatics, Game Development, 2017
- Tom Vaessen. “Entity Behaviour Editor Money Maker Deluxe”. Bachelor’s Thesis. Fontys University of Applied Sciences, Department of Informatics, Game Design & Technology, 2017