Guillermo A. Pérez — CV

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Education

Université libre de Bruxelles (ULB)	**Brussels, Belgium**
Ph.D. Computer Science	*2012–2016*
National Tsing-Hua University (NTHU)	**Hsinchu, Taiwan**
M.Sc. Information Systems and Applications	*2010–2012*
Universidad Tecnológica Centroamericana (UNITEC)	**Tegucigalpa, Honduras**
*B.Sc. Computer Science, **Summa cum Laude***	*2005–2009*

Awards and Scholarships

- Outstanding Paper Award – AAAI Conf. on AI (AAAI) — *2025*
- Best Paper Award – Int'l Conf. on Formal Modeling & Analysis of Timed Sys. (FORMATS) — *2023*
- Outstanding Teaching Award within the Faculty of Science, University of Antwerp — *2021*
- Fondation Wiener-Anspach Post-Doctoral subsidy — *2017*
- Kurt Gödel medal for my synthesis tool AbsSynthe at FLoC Olympic Games — *2014*
- Fonds de la Recherche Scientifique (F.R.S.-FNRS) Aspirant fellowship — *2014–2018*
- International Cooperation and Development Fund (ICDF) scholarship — *2010–2012*

In the media

My research, mostly in the context of formal methods for trustworthy AI, has been featured in the media:

- Our "outstanding" AAAI 2025 paper on a decidable class of partially observable Markov decision processes was the topic of two blog posts in Le Monde's binaire and it was covered by AIhub.org
- Results from Dennis Groß' 2020 collaboration with TNO on attacking models for image classification were featured in an article of NewScientist

Employment

University of Antwerp	**Antwerp, Belgium**
Tenured Associate Professor	*October 2023–present*
University of Antwerp	**Antwerp, Belgium**
Tenure-Track Assistant Professor	*October 2018–2023*
Université libre de Bruxelles	**Brussels, Belgium**
Research Assistant (supported by F.R.S.-FNRS)	*January 2017–October 2018*
University of Oxford	**Oxford, United Kingdom**
Visiting Researcher	*2017*
Informática Atlántida	**Tegucigalpa, Honduras**
Software Engineer	*2008–2010*

Membership in Scientific Societies

Member of ELLIS: European Laboratory for Learning and Intelligent Systems	**Europe**
Working with colleagues in Europe on formal methods for and with artificial intelligence	*2023–present*

Member of Flanders Make core lab at the University of Antwerp	**Antwerp, Belgium**
The Flemish strategic research center for the manufacturing industry	*2020–present*

Languages

English: Fluent	**French:** Fluent
Dutch: Fluent	**Mandarin Chinese:** Basic
Spanish: Native	**German:** Basic

Supervision

Post-doctoral researchers
o Dr. Marnix Suilen	*2024–present*

PhD students
o Kevin Dubrulle (with Prof. Bruyère at UMons)	*2025–present*
o Vanessa Flügel	*2025–present*
o Kasper Engelen	*2022–present*

Alumni
o Dr. Ramesh Krishnamurthy (with Prof. Denil at UAntwerp)	*2021–2025*
o Dr. Shrisha Rao	*2021–2025*
o Dr. Gaëtan Staquet (with Prof. Bruyère at UMons)	*2020–2024*
o Dr. Tim Leys	*2020–2024*
o Dr. Florent Delgrange (with Prof. Nowé at VUB)	*2020–2024*
o Dr. Dennis Gross (with Prof. Jansen at Radboud)	*2019–2024*
o Dr. Ritam Raha (with Dr. Fijalkow at LaBRI, Bordeaux)	*2019–2023*
o Dr. Raphaël Berthon (with Prof. Raskin at ULB)	*2018-2022*

Teaching and Service

Bachelor's courses taught at UAntwerp
o Theoretical Computer Science Seminar (2nd Sem.)	*2024–present*
o Compilers (1st Sem.)	*2019–present*

Master's courses taught at UAntwerp
o Mathematical Foundations of Reinforcement Learning (1st Sem.)	*2021–present*
o Specification and Verification (1st Sem.)	*2019–present*
o Programming Paradigms (2nd Sem.)	*2019–present*
o Software Testing and Beyond Summer School	*2025–present*

Service at UAntwerp
o Vice-chair of the Department of Computer Science	*2025–present*
o CS-Department Planning Manager for Students and Assistants Supporting Courses	*2025–present*
o Member of the Pre-Screening Commission for Int'l Masters' Programs in CS	*2018–present*

Service to the Community

Invited talks
Decidable Problems for Partially Observable MDPs	**Croatia**
8th International Symposium on AI Verification (SAIV)	*2025*
The Reactive Synthesis Competition (SYNTCOMP): 2018-2021	**Germany**
Automated Synthesis: Functional, Reactive and Beyond - Dagstuhl Seminar (24171)	*2024*

Parameter Synthesis for One-Counter Automata — France
10th International Workshop on Weighted Automata: Theory and Applications — 2021

Regret Minimization in Discounted-Sum Games — Belgium
International Symposium on Games, Automata, Logics, and Formal Verification (GandALF) — 2020

Revisiting Synthesis for One-Counter Automata — Germany
22nd International Workshop on Verification of Infinite-State Systems — 2020

Optimizing Expectation with Guarantees in POMDPs — Belgium
Workshop: Theory and Algorithms in Graph and Stochastic Games — 2019

Graph-Based Reductions for Model Checking and Learning MDPs — Germany
Machine Learning and Model Checking Join Forces - Dagstuhl Seminar (18121) — 2018

Competition organizer

Annual Reactive Synthesis Competition, with S. Jacobs, P. Schlehuber-Caissier
SYNTCOMP is affiliated with the conference CAV, `https://www.syntcomp.org/` — 2019–present

Steering committee member

o The International Conference on Quantitative Evaluation of SysTems (QEST) — 2023–2027

Program chair

o Organizer of the "The Futures of Reactive Synthesis" Dagstuhl seminar (23391), with N. Fijalkow, B. Finkbeiner, and E. Polgreen — 2023
o General & program chair of the Int'l Conf. on Concurrency (CONCUR) 2023, with J.-F. Raskin — 2023
o Workshop chair of the Federated Logic Conference (FLoC) 2022, joint with S. Almagor — 2022
o Program chair of the Workshop on Synthesis (SYNT 2021), joint with E. Polgreen — 2021
o Organizer of SYNTCOMP Camp, a satellite tutorial of ETAPS 2019 — 2019

Program committee member

o 52nd EATCS Int'l Colloquium on Automata, Languages, and Programming (ICALP 2026) — 2026
o 32st Int'l Conf. on Tools & Algorithms for the Construction & Analysis of Systems (TACAS 2026) — 2026
o 45th IARCS Conf. on Foundations of Software Tech. and Theoretical Comp. Sci. (FSTTCS 2025) — 2025
o 11th Symposium on Dependable Software Eng. Theories, Tools and Applications (SETTA 2025) — 2025
o 50th International Symposium on Mathematical Foundations of Computer Science (MFCS 2025) — 2025
o 35th Int'l Conference on Concurrency Theory (CONCUR 2024) — 2024
o 23rd Int'l Conference on Autonomous Agents and Multi-Agent Systems (AAMAS 2024) — 2024
o 32nd EACSL Annual Conference on Computer Science Logic (CSL 2024) — 2024
o 34rd Benelux Conf. on AI and the 31th Belgian Dutch Conf. on ML (BNAIC/BeNeLearn 2022) — 2022
o 18th Conference on Formal Modeling and Analysis of Timed Systems (FORMATS 2020) — 2020
o Int'l Symposium on AI Verification (SAIV) — 2024, 2025
o Int'l Conference on Applications and Theory of Petri Nets and Concurrency (PN) — 2024, 2025
o AAAI Conference on Artificial Intelligence (AAAI) — 2021, 2022, 2023, 2026
o Int'l Symp. on Games, Automata, Logics, and Formal Verif. (GandALF) — 2021, 2022, 2023, 2024
o Conference on Reachability Problems (RP) — 2019, 2022, 2025
o Workshop on Synthesis (SYNT) — 2019, 2022, 2024, 2025

Other service

o Artifact Evaluation Chair for FoSSaCS 2026 — 2026
o Part of the iCORE Ranking Application for QEST-FORMATS — 2025
o Scientific Advisor of ReqCon.ai in ELSA-ai.eu Funded Project — 2025

Research Grants

PI of Synthesis of reactive systems from formal specifications and examples (SynthEx) — €194K
Funded by the Research Foundation - Flanders (FWO) at UAntwerp — 2024–2027

co-PI of Infectious disease economics and AI with guarantees (DESCARTES)   €800K
Funded by the Inter-university Research Fund (iBOF), Flanders, Belgium   *2021–2024*

co-PI of Deterministic and inexpensive realizations of advanced control (DIRAC-SBO)   €468K
Funded by Flanders Make, the strategic research center for the Flemish manufacturing industry   *2020–2023*

PI of Safe Artificial Intelligence and Learning for Verification (SAILor)   €254K
Funded by the Research Foundation - Flanders (FWO) at UAntwerp   *2020–2023*

PI of Counter-Automata Algorithms for Software Verification Tools (CAST)   €205K
Funded by the University Research Fund (BOF) at UAntwerp   *2019–2023*