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

- Best 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

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 the NEXOR consortium	**Antwerp, Belgium**
Working on the next generation of cyber-physical systems at the University of Antwerp	*2021–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*

Supervision

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

PhD students
o Allen Joseph (with Dr. Filiot at ULB)   *2024–present*
o Kasper Engelen   *2022–present*
o Shrisha Rao   *2021–present*
o Ramesh Krishnamurthy (with Prof. Denil at UAntwerp)   *2021–present*
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)   *2020–2023*
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

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

Master's courses
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*

Invited speaker

Automated Synthesis: Functional, Reactive and Beyond - Dagstuhl Seminar (24171)   **Germany**
The Reactive Synthesis Competition (SYNTCOMP): 2018-2021   *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*

Machine Learning and Model Checking Join Forces - Dagstuhl Seminar (18121)   **Germany**
Graph-Based Reductions for Model Checking and Learning MDPs   *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 and program chair of the International Conference on Concurrency Theory (CONCUR) 2023,

      joint with J.-F. Raskin   *2023*
- Workshop chair of the Federated Logic Conference (FLoC) 2022, joint with S. Almagor   *2022*
- Program chair of the Workshop on Synthesis (SYNT 2021), joint with E. Polgreen   *2021*
- Organizer of SYNTCOMP Camp, a satellite tutorial of ETAPS 2019   *2019*

Program committee member

- 32st International Conference on Tools and Algorithms for the Construction and Analysis of Systems (TACAS 2026)   *2026*
- 50th International Symposium on Mathematical Foundations of Computer Science (MFCS 2025) *2025*
- 7th Int'l Symposium on AI Verification (SAIV 2024)   *2024*
- 35th Int'l Conference on Concurrency Theory (CONCUR 2024)   *2024*
- 23rd Int'l Conference on Autonomous Agents and Multi-Agent Systems (AAMAS 2024)   *2024*
- 32nd EACSL Annual Conference on Computer Science Logic (CSL 2024)   *2024*
- 34rd Benelux Conference on Artificial Intelligence and the 31th Belgian Dutch Conference on Machine Learning (BNAIC/BeNeLearn 2022)   *2022*
- 18th Conference on Formal Modeling and Analysis of Timed Systems (FORMATS 2020)   *2020*
- Int'l Conference on Applications and Theory of Petri Nets and Concurrency (PN)   *2024, 2025*
- AAAI Conference on Artificial Intelligence (AAAI)   *2021, 2022, 2023*
- Conference on Reachability Problems (RP)   *2019, 2022, 2025*
- Int'l Symp. on Games, Automata, Logics, and Formal Verif. (GandALF)   *2021, 2022, 2023, 2024*
- Workshop on Synthesis (SYNT)   *2019, 2022, 2024, 2025*

Artifact evaluation chair

- 29th International Conference on Foundations of Software Science and Computation Structures (FoSSaCS 2026)   *2026*

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*

Software Tools

- AbsSynthe: A controller-synthesis tool from safety specifications
- GPOMCP: A partial-observation Monte Carlo planner with guarantees
- Acacia-bonsai: Universal coBüchi synthesis algorithms for temporal specifications