

Guillermo A. Pérez — CV

Middelheimlaan 1 – 2020 Antwerpen – Belgium

☎ +31 (0)6 11781544 • ✉ guillermo.perez@uantwerpen.be

🌐 www.uantwerpen.be/en/staff/guillermoalberto-perez/

Education

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

Awards and Scholarships

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

Membership in Scientific Societies

Member of ELLIS: European Laboratory for Learning and Intelligent Systems <i>Working with colleagues in Europe on formal methods for and with artificial intelligence</i>	2023–present
Member of the NEXOR consortium <i>Working on the next generation of cyber-physical systems at the University of Antwerp</i>	Antwerp, Belgium 2021–present
Member of Flanders Make core lab at the University of Antwerp <i>The Flemish strategic research center for the manufacturing industry</i>	Antwerp, Belgium 2020–present

Languages

English: Fluent
Dutch: Fluent
Spanish: Native

French: Fluent
Mandarin Chinese: Intermediate
German: Basic

Student Supervision

PhD students

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

Teaching

Bachelor's courses

- Compilers (Fall) 2019–present

Master's courses

- Mathematical Foundations of Reinforcement Learning (Fall) 2021–present
- Specification and Verification (Fall) 2019–present
- Programming Paradigms (Spring) 2019–present

Service

Invited speaker

- 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** Germany
Graph-Based Reductions for Model Checking and Learning MDPs 2018

Competition organizer

- Annual Reactive Synthesis Competition (SYNTCOMP) joint with S. Jacobs**
Affiliated with the SYNT workshop series and the conference CAV, syntcomp.org 2019–present

Program chair

- Organizer of the “The Futures of Reactive Synthesis” Dagstuhl seminar (23391), with N. Fijalkow, B. Finkbeiner, and E. Polgreen 2023
- 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.....

- 14th Symposium on Games, Automata, Logics, and Formal Verification (GandALF 2023) 2023
- 34rd Benelux Conference on Artificial Intelligence and the 31th Belgian Dutch Conference on Machine Learning (BNAIC/BeNeLearn 2022) 2022
- 13th Symposium on Games, Automata, Logics, and Formal Verification (GandALF 2022) 2022
- 16th International Conference on Reachability Problems (RP 2022) 2022
- 11th Workshop on Synthesis (SYNT 2022) 2022
- 36th AAAI Conference on Artificial Intelligence (AAAI 2022) 2022
- 35th AAAI Conference on Artificial Intelligence (AAAI 2021) 2021
- 12th Symposium on Games, Automata, Logics, and Formal Verification (GandALF 2021) 2021
- 18th Conference on Formal Modeling and Analysis of Timed Systems (FORMATS 2020) 2020
- 13th Conference on Reachability Problems (RP 2019) 2019
- 8th Workshop on Synthesis (SYNT 2019) 2019

Research Grants

- 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
- External co-PI of EXplainable Data Science using Formal Verification (EXoDuS)**
VWData kickstarter project with Dr. Jansen jointly funded by NWO, TNO, Radboud University 2019–2023

Software Tools

- AbsSynthe: A controller-synthesis tool from safety specifications
- GPOMCP: A partial-observation Monte Carlo Planning algorithm for the guaranteed payoff optimization problem
- Acacia-bonsai: A minimal implementation of universal coBüchi synthesis algorithms for temporal synthesis

References

- Ann Nowé, Ph.D.
Prof. at VUB, Belgium
Email: ann.nowe@vub.be
- Frits W. Vaandrager, Ph.D.
Prof. at Radboud University, Netherlands
Email: f.vaandrager@cs.ru.nl
- Joost-Pieter Katoen, Ph.D.
Prof. at RWTH Aachen University, Germany
Email: katoen@cs.rwth-aachen.de
- Jean-François Raskin, Ph.D.
Prof. at Université libre de Bruxelles, Belgium
Email: jraskin@ulb.ac.be