Guillermo A. Pérez | CV

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Present Job

Université libre de Bruxelles — **Brussels, Belgium**
Research Assistant (supported by F.R.S.-FNRS) — *January 2017–now*

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*

Grants and Scholarships

- Fondation Wiener-Anspach Post-Doctoral subsidy — *2017*
- Fonds de la Recherche Scientifique (F.R.S.-FNRS) Aspirant fellowship — *2014–2018*
- International Cooperation and Development Fund (ICDF) scholarship — *2010–2012*

Experience

Academic

University of Oxford — **Oxford, United Kingdom**
Visiting Researcher (hosted by Prof. James Worrell) — *2017*

ULB — **Brussels, Belgium**
Part of the organizational team of: — *2013–2016*

- Highlights Conference — *September 2016*
- Petri Nets & ACSD Conferences — *June 2015*
- Regular 'Centre Fédéré en Vérification' Seminars[1] — *2013–2016*

[1] For more information visit `http://cfv.ulb.ac.be/`.

ULB **Brussels, Belgium**
Teaching Assistant *2015–2016*

- Introduction to Language Theory & Compiling *Fall 2016*
- Formal Verification *Spring 2016, 2015*
- Informatique Fondamentale *Spring 2016, 2015*

NTHU **Hsinchu, Taiwan**
Teaching Assistant *2011*

- Java Programming Language *Fall 2011*
- Introduction to Information Systems *Spring 2011*

Professional

CHF International **Tegucigalpa, Honduras**
System's Analyst (Volunteer) *August 2012*
CHF International coordinates social projects with local self-organized groups in Honduras. I assessed the implementation of an online system designed to help CHF better communicate with these groups.

Informática Atlántida **Tegucigalpa, Honduras**
Software Engineer (Full Time) *2008–2010*

- designed and implemented the company's web application to manage new software requirements and maintenance orders for existing software
- participated as project leader in the implementation and integration of new credit card system

Languages

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

References

- Jean-François Raskin, Ph.D.
  Prof. at ULB, Belgium
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- Ufuk Topcu, Ph.D.
  Prof. at the University of Texas at Austin, USA
  Email: utopcu@utexas.edu
- James Worrell, Ph.D.
  Prof. at University of Oxford, UK
  Email: jbw@cs.ox.ac.uk
- Krishnendu Chatterjee, Ph.D.
  Prof. at Institute of Science and Technology Austria
  Email: krishnendu.chatterjee@ist.ac.at

Publications

[1] P. Hunter, G. A. Pérez, and J.-F. Raskin. "Reactive synthesis without regret". In: *Acta Inf.* 54.1 (2017), pp. 3–39. DOI: 10.1007/s00236-016-0268-z. URL: https://doi.org/10.1007/s00236-016-0268-z.

[2] G. A. Pérez. "The fixed initial credit problem for partial-observation energy games is Ack-complete". In: *Inf. Process. Lett.* 118 (2017), pp. 91–99. DOI: 10.1016/j.ipl.2016.10.005. URL: https://doi.org/10.1016/j.ipl.2016.10.005.

[3] S. Jacobs et al. "The first reactive synthesis competition (SYNTCOMP 2014)". In: *STTT* 19.3 (2017), pp. 367–390. DOI: 10.1007/s10009-016-0416-3. URL: https://doi.org/10.1007/s10009-016-0416-3.

[4] S. Le Roux and G. A. Pérez. "The Complexity of Graph-Based Reductions for Reachability in Markov Decision Processes". In: *FoSSaCS*. To Appear. 2017.

[5] K. Chatterjee, P. Novotný, G. A. Pérez, J.-F. Raskin, and D. Zikelic. "Optimizing Expectation with Guarantees in POMDPs". In: *Proceedings of the Thirty-First AAAI Conference on Artificial Intelligence, February 4-9, 2017, San Francisco, California, USA*. Ed. by S. P. Singh and S. Markovitch. AAAI Press, 2017, pp. 3725–3732. URL: http://aaai.org/ocs/index.php/AAAI/AAAI17/paper/view/14354.

[6] S. Bharadwaj, S. L. Roux, G. A. Pérez, and U. Topcu. "Reduction Techniques for Model Checking and Learning in MDPs". In: *Proceedings of the Twenty-Sixth International Joint Conference on Artificial Intelligence, IJCAI 2017, Melbourne, Australia, August 19-25, 2017*. Ed. by C. Sierra. ijcai.org, 2017, pp. 4273–4279. DOI: 10.24963/ijcai.2017/597. URL: https://doi.org/10.24963/ijcai.2017/597.

[7] E. Filiot, I. Jecker, N. Lhote, G. A. Pérez, and J.-F. Raskin. "On delay and regret determinization of max-plus automata". In: *32nd Annual ACM/IEEE Symposium on Logic in Computer Science, LICS 2017, Reykjavik, Iceland, June 20-23, 2017*. IEEE Computer Society, 2017, pp. 1–12. DOI: 10.1109/LICS.2017.8005096. URL: https://doi.org/10.1109/LICS.2017.8005096.

[8] P. Hunter, G. A. Pérez, and J.-F. Raskin. "Minimizing Regret in Discounted-Sum Games". In: *25th EACSL Annual Conference on Computer Science Logic, CSL 2016, August 29 - September 1, 2016, Marseille, France*. Ed. by J.-M. Talbot and L. Regnier. Vol. 62. LIPIcs. Schloss Dagstuhl - Leibniz-Zentrum fuer Informatik, 2016, 30:1–30:17. DOI: 10.4230/LIPIcs.CSL.2016.30. URL: https://doi.org/10.4230/LIPIcs.CSL.2016.30.

[9] R. Brenguier, G. A. Pérez, J.-F. Raskin, and O. Sankur. "Admissibility in Quantitative Graph Games". In: *36th IARCS Annual Conference on Foundations of Software Technology and Theoretical Computer Science, FSTTCS 2016, December 13-15, 2016, Chennai, India*. Ed. by A. Lal, S. Akshay, S. Saurabh, and S. Sen. Vol. 65. LIPIcs. Schloss Dagstuhl - Leibniz-Zentrum fuer Informatik, 2016, 42:1–42:14. DOI: 10.4230/LIPIcs.FSTTCS.2016.42. URL: https://doi.org/10.4230/LIPIcs.FSTTCS.2016.42.

[10] R. Brenguier, L. Clemente, P. Hunter, G. A. Pérez, M. Randour, J.-F. Raskin, O. Sankur, and M. Sassolas. "Non-Zero Sum Games for Reactive Synthesis". In: *Language and Automata Theory and Applications - 10th International Conference, LATA 2016, Prague, Czech Republic, March 14-18, 2016, Proceedings*. Ed. by A. Dediu, J. Janousek, C. Martín-Vide, and B. Truthe. Vol. 9618. Lecture Notes in Computer Science. Springer, 2016, pp. 3–23. DOI: 10.1007/978-3-319-30000-9_1. URL: https://doi.org/10.1007/978-3-319-30000-9_1.

[11] S. Jacobs et al. "The 3rd Reactive Synthesis Competition (SYNTCOMP 2016): Benchmarks, Participants & Results". In: *Proceedings Fifth Workshop on Synthesis, SYNT@CAV 2016, Toronto, Canada, July 17-18, 2016*. Ed. by R. Piskac and R. Dimitrova. Vol. 229. EPTCS. 2016, pp. 149–177. DOI: 10.4204/EPTCS.229.12. URL: https://doi.org/10.4204/EPTCS.229.12.

[12] P. Hunter, G. A. Pérez, and J.-F. Raskin. "Looking at Mean-Payoff Through Foggy Windows". In: *Automated Technology for Verification and Analysis - 13th International Symposium, ATVA 2015, Shanghai, China, October 12-15, 2015, Proceedings*. Ed. by B. Finkbeiner, G. Pu, and L. Zhang. Vol. 9364. Lecture Notes in Computer Science. Springer, 2015, pp. 429–445. DOI: 10.1007/978-3-319-24953-7_31. URL: https://doi.org/10.1007/978-3-319-24953-7_31.

[13] P. Hunter, G. A. Pérez, and J.-F. Raskin. "Reactive Synthesis Without Regret". In: *26th International Conference on Concurrency Theory, CONCUR 2015, Madrid, Spain, September 1.4, 2015*. Ed. by L. Aceto and D. de Frutos-Escrig. Vol. 42. LIPIcs. Schloss Dagstuhl - Leibniz-Zentrum fuer Informatik, 2015, pp. 114–127. DOI: 10.4230/LIPIcs.CONCUR.2015.114. URL: https://doi.org/10.4230/LIPIcs.CONCUR.2015.114.

[14] T. Brihaye, G. Geeraerts, A. Haddad, B. Monmege, G. A. Pérez, and G. Renault. "Quantitative Games under Failures". In: *35th IARCS Annual Conference on Foundation of Software Technology and Theoretical Computer Science, FSTTCS 2015, December 16-18, 2015, Bangalore, India*. Ed. by P. Harsha and G. Ramalingam. Vol. 45. LIPIcs. Schloss Dagstuhl - Leibniz-Zentrum fuer Informatik, 2015, pp. 293–306. DOI: 10.4230/LIPIcs.FSTTCS.2015.293. URL: https://doi.org/10.4230/LIPIcs.FSTTCS.2015.293.

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[19] G. A. Pérez, C. Kao, Y. Chung, and W. Hsu. "A hybrid just-in-time compiler for android: comparing JIT types and the result of cooperation". In: *Proceedings of the 15th International Conference on Compilers, Architecture, and Synthesis for Embedded Systems, CASES 2012, part of the Eighth Embedded Systems Week, ESWeek 2012, Tampere, Finland, October 7-12, 2012*. Ed. by A. Jerraya, L. P. Carloni, V. J. M. III, and R. M. Rabbah. ACM, 2012, pp. 41–50. DOI: 10.1145/2380403.2380418. URL: http://doi.acm.org/10.1145/2380403.2380418.

[20] C. Wang, G. A. Pérez, Y. Chung, W. Hsu, W. Shih, and H. Hsu. "A method-based ahead-of-time compiler for android applications". In: *Proceedings of the 14th International Conference on Compilers, Architecture, and Synthesis for Embedded Systems, CASES 2011, part of the Seventh Embedded Systems Week, ESWeek 2011, Taipei, Taiwan, October 9-14, 2011*. Ed. by R. K. Gupta and V. J. Mooney. ACM, 2011, pp. 15–24. DOI: 10.1145/2038698.2038704. URL: http://doi.acm.org/10.1145/2038698.2038704.