

Raul Astudillo

Curriculum Vitae

Address: Rhodes Hall 288, Cornell University, Ithaca, NY 14850
Email: ra598@cornell.edu
Citizenship: Mexican

Education

- 2016-current **Cornell University, USA.**
Ph.D. in Operations Research and Information Engineering. GPA: 4.18/4.30
◦ Advisor: Peter I. Frazier
◦ Minors: Computer Science and Statistics
- 2011-2016 **Center for Research in Mathematics (CIMAT), Mexico.**
B.S. in Mathematics. GPA: 9.7/10
◦ Advisor: Victor Manuel Perez-Abreu
◦ Highest GPA of the class 2011-2016

Research interests

Bayesian Optimization, Preference Elicitation, Simulation Optimization, Optimal Learning, Bayesian Machine Learning

Selected graduate coursework

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| ◦ Applied Stochastic Processes | ◦ Statistical Learning Theory |
| ◦ Mathematical Programming | ◦ Bayesian Statistics and Data Analysis |
| ◦ Convex Optimization | ◦ Advanced Machine Learning |
| ◦ Bayesian Machine Learning | ◦ Numerical Methods for Data Science |

Publications and working papers

- R. Astudillo and P.I. Frazier, "Bayesian Optimization for Decision Support", *Working Paper*.
- R. Astudillo, S. Toscano-Palmerin and P.I. Frazier, "Bayesian Optimization with Risk Measures", *Working Paper*.

R. Astudillo and P.I. Frazier, "Bayesian Optimization under Utility Uncertainty", *Working Paper*.

R. Astudillo and P.I. Frazier, "Bayesian Optimization of Composite Functions", *International Conference on Machine Learning*, 2019.

R. Astudillo and P.I. Frazier, "Multi-Attribute Bayesian Optimization under Utility Uncertainty", *NIPS workshop on Bayesian Optimization*, 2017.

Presentations

July 2019 R. Astudillo and P.I. Frazier, "Bayesian Optimization of Composite Functions with Application to Computationally Expensive Inverse Problems", *Applied Inverse Problems Conference*, Grenoble, France.

June 2019 R. Astudillo and P.I. Frazier, "Bayesian Optimization of Composite Functions", *International Conference on Machine Learning*, Long Beach, CA.

Jan 2019 R. Astudillo and P.I. Frazier, "A Utility Uncertainty Approach to Multi-Attribute Bayesian Optimization", *INFORMS Computing Society Conference*, Knoxville, TN.

Nov 2018 R. Astudillo and P.I. Frazier, "A Utility Uncertainty Approach to Multi-Attribute Bayesian Optimization", *INFORMS Annual Meeting*, Phoenix, AZ.

Dec 2017 R. Astudillo and P.I. Frazier, "Multi-Attribute Bayesian Optimization under Utility Uncertainty", *NIPS workshop on Bayesian Optimization*, Long Beach, CA. (contributed poster)

Teaching experience

Cornell University, USA.

Teaching Assistant

Fall 2018	Statistical Principles	Graduate
Spring 2017	Engineering Stochastic Processes	Undergraduate
Fall 2016	Basic Probability and Statistics	Undergraduate

Center for Research in Mathematics (CIMAT), Mexico.

Teaching Assistant

Fall 2015	Measure Theory and Probability	Graduate
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University of Guanajuato, Mexico.

Teaching Assistant

Spring 2015	Complex Analysis	Undergraduate
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Selected awards

2015 Second Prize - XXII International Mathematics Competition for University Students (IMC), Bulgaria.

- 2014 Bronze Medal - VI Iberoamerican Interuniversity Mathematics Competition (CIIM), Costa Rica.
- 2014 *Orgullo UG* Academic Excellence Award - University of Guanajuato.
- 2013 Bronze Medal - XVI Iberoamerican Mathematics Olympiad for University Students (OIMU).
- 2012-2016 Academic Excellence Fellowship - Center for Research in Mathematics.

Other relevant academic activities

- Jan-Feb 2016 **Institute for Pure and Applied Mathematics (IMPA)**, *Brazil*.
Summer Program
- October 2015 **Open Government Partnership Global Summit**, *Mexico*.
Winner (tie) of the OGP-U essay contest for open government and sustainable development
- Spring 2015 **Center for Research and Teaching in Economics (CIDE)**, *Mexico*.
Talentum Universidad Academic Program
 - o Became one of the 60 university students selected, among 2,000 applicants, to participate in this program, which consisted of training in soft skills and awareness of the current societal challenges in Mexico.

Computer skills

- Development MATLAB, Python, R
- Tools Git, \LaTeX , Microsoft Office

Languages

English (proficient), Spanish (native)