Luis Barba

Postdoc

Machine Learning and Optimization Group,
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Academic trayectory

2019-   **Postdoc**, *Machine Learning and Optimization Group*, EPFL, Lausanne, Switzerland.
I work in the Machine Learning and Optimization Laboratory under the supervision of Prof. Martin Jaggi. My worked focused on state of the art Machine Learning models and tasks, as well as the design of algorithms for distributed training of machine learning tasks.

2016-2019   **Postdoc**, *Theory of Combinatorial Algorithms Group*, ETH, Zurich, Switzerland.
I worked in the Theory of Combinatorial Algorithms group under the supervision of Prof. Emo Welzl. My worked focused the design of efficient algorithms and data structures, mainly in the field of Computational Geometry, Graph Theory and Optimization.

2012-2016   **PhD in Computer Science**, *Carleton University and Université Libre de Bruxelles*, Ottawa, Canada, Brussels, Belgium.
Senate Medal for Outstanding Graduate Work

2009-2011   **Master's degree in Computer Science**, *Universidad Nacional Autónoma de México (UNAM)*, Mexico City, Mexico.
Average: 100%, Graduated with highest honors (Mención Honorífica)

2004–2009   **Bachelor in Mathematics**, *Universidad Nacional Autónoma de México (UNAM)*, Mexico City, Mexico.
Average: 97.1%

Industry experience

2019-   **Machine Learning consultant**, *NanoAssembly project, EMPA, ETH-Zurich, EPFL*, Switzerland.
I worked to develop ML algorithms for the detection of carbon nanotubes in Raman scans.

2009-2011   **GIS Consulting**, *Buffette de Soluciones Integrales SC*, Mexico.
I worked as an external consultant in the development of geographical information systems

2006-2009   **System Director**, *NetStudio Mexico SC*, Mexico.
As a co-founder and system director of this start-up, we developed geographical information systems for banks and government entities.

Grants

201,700 CHF   **ETH Postdoctoral Fellowship**, *2016-2018*, (over 2 years).

150,000 CAD   **Vanier Canada Graduate Scholarships**, *2013-2016*, (over 3 years).

36,000 USD   **CONACyT scholarship for graduate studies abroad**, *2013-2016*, (over 3 years).

15,000 CAD   **Ontario Graduate Scholarship (OGS) at Carleton University for 2013-2014, (Declined)**, *2013*.

43,200 Euros   **Fund for Research Training in Industry and Agriculture, FRIA-FNRS**, *2012-2013*, (over 2 years).

192,000 MXN   **Conacyt National scholarship for graduate studies**, *2009-2011*, (over 2 years).

25,000 MXN   **UNAM Graduation encouraging program (Programa de fomento a la graduación)**, *Awarded for being the first student to graduate from my class*, 2011.

Awards

2018	**Best paper award, LATIN'18**, *Given to the best research contribution to the 13th Latin American Theoretical Informatics Symposium.*
2016	**Senate medal, Carleton University**, *This represents the highest recognition of academic excellence that Carleton University bestows upon graduate students.*
2015	**Best student presentation award, SoCG'15**, *Given to the best presentation given by a student during the 31st Symposium on Computational Geometry.*
2013	**Best student presentation award, SoCG'13**, *Given to the best presentation given by a student during the 29th Symposium on Computational Geometry.*
2012	**Silver Medal Alfonso Caso**, *Given to the must distinguished student in all graduate programs in Computer Science for the year 2011 at UNAM.*

Languages

Spanish (*Mother Tongue*), · *English (*Fluent*) · German (Level B2) · French (Level B2) · Italian (Level A2).*

Programing

Languages	**Python** · **Pytorch** · **C++** · **Java** · **SQL** · **Run:AI**.

Teaching Experience

2019	**Head Assistant**, *ETH-Zurich*, Optimization for Data Science.
2017-2018	**Lecturer**, *ETH-Zurich*, Computational Geometry.
2017-2018	**Teaching Assistant**, *ETH-Zurich*, Algorithms Lab.
2017	**Invited Lecturer**, *University of Tokyo*, Enclosing problems and Voronoi diagrams.
2016-2017	**Lecturer**, *ETH-Zurich*, Geometry Seminar.
2016	**Teaching Assistant**, *ETH-Zurich*, Diskrete Mathematik.
2010	**Teaching Assistant**, *UNAM*, Linear Algebra.
2009	**Teaching Assistant**, *UNAM*, Selected Topics of Discrete Mathematics.
2009	**Teaching Assistant**, *UNAM*, Graph Theory.
2002-2003	**Private Tutor**, *Logos High-school*, Mathematics, Physics and Chemistry.

Conference Program Committees

SoCG'18	**PC Member**, *34th Symposium on Computational Geometry.*
EuroCG'18	**PC Member**, *34th European Workshop on Computational Geometry.*
CCCG'17	**PC Member**, *29th Canadian Conference on Computational Geometry.*

Student Supervision

Sep 2021	**Denys Pushkin**, *EPFL Semester project.*
Sep 2020	**Emmanouil Angelis**, *EPFL internship.*
Sep 2019	**Raphael Wegner**, *ETH master student.*
July 2019	**Cyril Frei**, *ETH master student.*
Sep 2018	**Cyril Frei**, *ETH bachelor student.*
Sep 2017	**Roland Schmid**, *ETH master student co-supervised with Patrick Schnider.*