

Dr. Alexis Jawtuschenko, PhD.

Personal Data

National ID: 29006449.

Birthdate: August, 16th. 1981.

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Web pages: [GitHub profile](#) – [LinkedIn profile](#)

University Degrees

PhD. at the University of Buenos Aires, Mathematical Sciences area (2018).

Thesis topic: Three Dimensional Meshes and Vectorial Numerical Analysis.

[Link to the PhD Thesis.](#)

MSc. in Mathematical Sciences at the University of Buenos Aires (2010).

Thesis topic: Integer Linear Programming and Operations Research applied to Auctions.

[Link to the Graduation Thesis.](#)

Skills in Natural Languages

I am fluent in Spanish, English and German.

Skills in Programming Languages and Computing

C++ , Python/NumPy/Pandas.

GNU Octave/MATLAB, IBM ILOG CPLEX, Zimpl.

LaTeX.

GNU/Linux Debian, Git, Bash.

Specialization Course

Workshop on Programming Techniques for the Science at the National University of Tucumán, Argentina (2017). Theory and practice of development topics in C, C++ , Python and Fortran for scientific problems. Completed with a grade of 100/100.

Link to my [Project Euler](#) Status.

Work Background in Programming and Informatics

C++ 3D Geometry and Meshing Software Developer at Niigata University (Japan).

From August 2022 to March 2023 as remote Freelancer.

From June 2023 to August 2023 with a Full Time position on-site as Visiting Professor/Researcher.

In this role I developed a 3D mesher to model thin silicon wafers in C++ with a visualization module in Python, that was transferred to the industry of electronic microcircuits in Japan.

Python/Pandas and CPLEX Software Engineer at Mercado Libre (Argentina). Full-Time position from August 2020 to June 2022. In this role I developed an optimization standalone tool to find solutions to the Operations Research Staffing Problem in fulfillment centers, with a Linear Programming model for IBM ILOG CPLEX and handmade Dynamic Programming algorithms to boost performance. I was responsible of the product and also trained Junior Analysts.

Php 5 and PostgreSQL Full Time Software Developer at the National Ministry of Education of Argentina. From June 2011 to March 2012.

ActionScript 3.0 and Python Junior Programming Trainee at DeveGo SA. (Argentina). Three months training for on-line games development from March 2011 to May 2011.

PHP, MySQL and HTML Part Time Developer at ViaRural.com SA. From June 2008 until February 2011. Successfully wrote two traditional and basic e-commerce AMD projects that ended in production.

Freelance PHP and MySQL Web Software Developer at EPIMAK (Argentina) during three months of 2010. Successfully wrote an AMD-like small platform for users and a shopcart.

Freelance C++ and Zimpl developer for the Government of the Autonomous City of Buenos Aires, from December 2008 to December 2009. In this project I built [an optimization software](#) to solve a public *multi-unit* combination auction, by means of implementing an Integer Linear Programming model to allocate the winners.

Junior Data Analyst – Data Entry – Software Maintainer at Kantar IBOPE Media (Argentina) from June 2006 to December 2006.

Scientific Background and Publications

Member of the Sakura Science Exchange Program, 2019 edition. Japan Science and Technology Agency. Niigata University, Japan. From August, 25th. to September, 1st. 2019.

Doctoral Researcher – Full Time with a Fellowship of the Ministry of Science of Argentina from April 2012 until March 2017.

Articles Published in International Peer-Reviewed Journals

[A mixed discretization of elliptic problems on polyhedra using anisotropic hybrid meshes.](#)
Calcolo, CALC-D-18-00054R1 (2019).

[An Asymmetric Multi-Item Auction Applied to Internet Service Procurement in Public Schools.](#)
Annals of Operations Research - 0254-5330 (2016).

Some Talks About Research in Numerical Analysis and Programming given in International Congresses

PyCon Brazil 2019. Ribeirão Preto, Brazil. October 2019.

PyCon Argentina 2019 (as collaborator). Buenos Aires, Argentina. December 2019.

Ninth Workshop on Numerical Analysis of Partial Differential Equations: *Santiago Numérico III*. Catholic University of Chile, Santiago. June 2017.

Fifth Congress for Applied, Computational and Industrial Mathematics (MACI Argentina). Thematic Session of Fundamentals of Numerical Methods and Applications. May 2015.

Eighth Workshop on Numerical Analysis of Partial Differential Equations: *La Serena Numérica II*. University of La Serena, Chile. January 2015.

PyCon Argentina 2018. Buenos Aires, Argentina. November 2018.

PyDay Rosario 2018. National University of Rosario, Argentina. October, 27th. 2018.

University Teaching and Research Background

Adjunct Professor – Part Time. Department of Mathematics and Sciences, University of San Andrés, Argentina. From March 2019 to August 2020.

Head Teaching Assistant. Full Time Research and Teaching Position. Department of Mathematics, University of Buenos Aires. From April 2013 to February 2020.

Head Teaching Assistant – Part Time. Technology Institute of Buenos Aires (ITBA).
From August 2018 to December 2018.

Adjunct Professor – Part Time. Universidad Abierta Interamericana, Argentina.
From August 2012 to March 2013.

Adjunct Professor – Part Time. National University of Avellaneda, Argentina. From February 2012 to June 2012.

Junior Teaching Assistant – Part Time. Department of Mathematics, University of Buenos Aires. From March 2010 to February 2012.