

# Eric Brandwein

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Computer Scientist

## Experience

- August 2024 – **University Teaching Assistant (Jefe de Trabajos Prácticos)**, *Algoritmos y Estructuras de Datos III, Departamento de Computación, Facultad de Ciencias Exactas y Naturales, UBA*, Buenos Aires, Argentina.  
Present
- August 2024 – **University Teaching Assistant**, *Algoritmos y Estructura de Datos, Departamento de Ingeniería, Universidad de San Andrés*, Buenos Aires, Argentina.
- October 2023 – **University Teaching Assistant (Ayudante de 1ra)**, *Algoritmos y Estructuras de Datos III, Departamento de Computación, Facultad de Ciencias Exactas y Naturales, UBA*, Buenos Aires, Argentina.  
August 2024 *Datos III, Departamento de Computación, Facultad de Ciencias Exactas y Naturales, UBA*, Buenos Aires, Argentina.  
Teaching a third-year course on algorithm design and analysis, with topics including dynamic programming, greedy algorithms, and graph algorithms. This includes preparing and giving lectures, building take-home exercises and exams, as well as grading exams and homework.
- January 2022 – **Software Engineer**, *Wildlife Studios*, Buenos Aires, Argentina.  
July 2022 Development of the mobile infrastructure used to display ads in games for Android, iOS, and Unity, including contributions that directly affect the revenue. Languages used include Kotlin, Swift, Objective-C, and C#, among others.
- August 2021 – **Software Engineering MTS**, *Mulesoft*, Buenos Aires, Argentina.
- December 2021 Quality Automation Engineering, working on the end to end tests in TypeScript for the product.
- March 2021 – **Software Engineer II**, *Medallia*, Buenos Aires, Argentina.
- August 2021 Member of the Test Infrastructure Engineering team, working in projects in a variety of languages and frameworks, including Flask, Node.js, and Java.
- February 2019 – **University Teaching Assistant (Ayudante de 2da)**, *Algoritmos y Estructuras de Datos I, Departamento de Computación, Facultad de Ciencias Exactas y Naturales, UBA*, Buenos Aires, Argentina.  
February 2020 *Datos I, Departamento de Computación, Facultad de Ciencias Exactas y Naturales, UBA*, Buenos Aires, Argentina.  
Teaching first year students how to write their first programs in C++.
- March 2015 – **Software Engineer**, *Mercadolibre*, Buenos Aires, Argentina.  
March 2017 Three-month training course, learning Java, SQL, HTML, CSS, and others. Then, mainly developing the Android native app, but also working with the Groovy/Grails and Node.js frameworks. During this time, I almost completely re-developed the company's home view for the Android app.

## Education

- 2023 – **PhD in Computer Science**, *University of Buenos Aires*, Buenos Aires, Argentina.  
Present On the topic of Graph Parameters and Parameterized Algorithms.

- 2015 – 2022 **Computer Science Master**, *University of Buenos Aires*, Buenos Aires, Argentina.  
 Marks average of 8.9 out of 10. Presented a master's thesis on an algorithm to compute the thinness of a tree graph in  $\mathcal{O}(n \cdot \log(n))$  time; a new result in the field. This development was later presented at the International Symposium on Combinatorial Optimization (ISCO) of 2022, and published on Springer Link: [https://link.springer.com/chapter/10.1007/978-3-031-18530-4\\_14](https://link.springer.com/chapter/10.1007/978-3-031-18530-4_14). The same thesis includes results on the thinness of other graph classes, such as grid and crown graphs.
- 2010 – 2014 **Bachelor with orientation on Information Technology**, *ORT High School*, Buenos Aires, Argentina.

## Publications

- (Sent for review) Bonomo-Braberman, F., Brandwein, E., Sau, I. Computing parameters that generalize interval graphs using restricted modular partitions.
- Bonomo-Braberman, F., Brandwein, E., Gonzalez, C. L., Sansone, A. (2025). On the thinness of trees. *Discrete Applied Mathematics*, 365, 39-60.
- Bonomo-Braberman, F., Brandwein, E., Oliveira, F. S., Sampaio, M. S., Sansone, A., Szwarcfiter, J. L. (2024). Thinness and its variations on some graph families and coloring graphs of bounded thinness. *RAIRO-Operations Research*, 58(2), 1681-1702.

## Talks

- “Parameterized algorithms for thinness via the cluster module number”, 11th Latin American Workshop on Cliques in Graphs, Ceará, Brazil, October 2024, joint work with Flavia Bonomo and Ignasi Sau.
- “Parameterized algorithms for thinness via the cluster module number”, Workshop SINFIN, Ciudad Autónoma de Buenos Aires, Argentina, March 2024, joint work with Flavia Bonomo and Ignasi Sau.

## Students

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| Bárbara Rivero   | Director of her thesis for the degree of Licenciada en Ciencias de la Computación, Departamento de Computación, Universidad de Buenos Aires, Buenos Aires, Argentina   |
| Manuela Martínez | Co-director of her thesis for the degree of Licenciada en Ciencias de la Computación, Departamento de Computación, Universidad de Buenos Aires, Buenos Aires, Argentina  |
| Manuel Robert    | Extra-official co-director of his thesis for the degree of Licenciado en Matemática, Departamento de Matemática, Universidad de Buenos Aires, Buenos Aires, Argentina  |
| Ayelén Dinkel    | Co-director of her thesis “Thinness condicionada a órdenes canónicos de ciertas clases de grafos” defended on December 2024 for the degree of Licenciada en Ciencias de Datos, Departamento de Computación, Universidad de Buenos Aires, Buenos Aires, Argentina |

## Article Refereeing

- Reviewer for LAGOS 2025, ISAAC 2024, and IPEC 2024.

## Languages

Spanish	<b>Native</b>	<i>Born and currently living in Argentina</i>
English	<b>Fluent</b>	<i>CAE, University of Cambridge</i>
Italian	<b>Good command</b>	<i>Trilingual Elementary School, and Italian family</i>
French	<b>Basic</b>	<i>6-month course with a native French professor</i>

## Other certificates

- Member of the team placing third on the 2019 and 2020 Argentinian Programming Tournaments (TAP).
- A total of 11 medals and recognitions in the National Argentinian Olympiads of Informatics (OIA) and Mathematics (OMA), including national Gold Medal at 14 years old.
- Cambridge Certificate of Advanced English (CAE).