

Curriculum Vitae

Martín Muñoz

I am a PhD Candidate at Pontificia Universidad Católica de Chile (PUC Chile) and a member of the Millennium Institute for Foundational Research on Data. I received a Master's degree and a professional degree in Computer Engineering in 2017, both from PUC Chile. I have taught as an Adjunct Professor at PUC Chile between 2021 and 2024. I am also part of the Teoría y Datos research group at PUC Chile.

My research interests are in the areas of evaluation algorithms, data management and logic in computer science.

Publications

- Martín Muñoz, Cristian Riveros. *Constant-delay enumeration for SLP-compressed documents*. Logical Methods in Computer Science (Accepted, exp. 2025).
- Martín Muñoz, Cristian Riveros. *Streaming Enumeration on Nested Documents*. ACM Transactions on Database Systems, Vol. 49, Issue 4 (2024).
- Martín Muñoz, Cristian Riveros. *Constant-delay enumeration for SLP-compressed documents*. 26th International Conference on Database Theory, ICDT 2023. 17 pages.
- Antoine Amarilli, Louis Jachiet, Martin Muñoz, and Cristian Riveros. *Efficient enumeration for annotated grammars*. PODS 2022: International Conference on Management of Data, 2022, 10 pages.
 - Selected for Lo Mejor de lo Nuestro at the 42nd IEEE International Conference of the Chilean Computer Science Society. LMN 2023.
- Martin Muñoz, Cristian Riveros. *Streaming enumeration on nested documents*. 25th International Conference on Database Theory, ICDT 2022, 18 pages.
- Marcelo Arenas, Martín Muñoz, Cristian Riveros. *Descriptive Complexity for Counting Complexity Classes*. Logical Methods in Computer Science Vol. 16, Issue 1 (2020).
- Marcelo Arenas, Martín Muñoz, Cristian Riveros. *Descriptive Complexity for Counting Complexity Classes*. 32nd Annual ACM/IEEE Symposium on Logic in Computer Science, LICS 2017, 12 pages.

Professional Activity

- Adjunct Professor at PUC Chile. 2021-2024.
- Young Researcher at the Center for Semantic Web Research, Chile. 2014–2017.

Awards

- VCLA International Student Awards 2019 – Outstanding Master Thesis Award for the work *Descriptive Complexity for Counting Complexity Classes*. TU Wien, Vienna.

Education

Academic Degrees

- PhD in Computer Science, PUC Chile. Expected March 2025.
- Master in Computer Science, PUC Chile. December, 2017.
- Computer Engineer, PUC Chile. December, 2017.

Teaching Experience

- I taught the following courses at PUC Chile as Adjunct Professor: Data Structures, one semester in 2022. Workshop on Competitive Programming, four semesters in 2023-2024.
- I was coach of the PUC Chile Competitive Programming Team from March 2020 until December 2024.
- I have been organizer and teacher at the Chilean Competitive Programming Winter Camp – 2023 and 2024 editions.
- I was a teaching assistant in the following courses: Computational Complexity, Design and Analysis of Algorithms, Logic in Computer Science, Discrete Mathematics, Introduction to Programming and Database Systems Implementation.

Scholarships

- National PhD Scholarship, National Commission for Scientific and Technological Research, Government of Chile, 2019.
- Bicentenary Scholarship, Government of Chile, 2016.
- Science and Technology Scholarship for Short Stays Abroad, National Commission for Scientific and Technological Research, Government of Chile, 2016.
- Talent and Inclusion Scholarship, School of Engineering, PUC Chile. 2011-2016.
- High Honors Scholarship (for an outstanding score in the national university examination), PUC Chile, 2011.

Research visits

- Three-month visit at the DIG group at Télécom Paris, September 2022. Financed by ANID, Chile.
- I did a one-week visit to professor Antoine Amarilli at Télécom Paris on September 2019.
- I did a six-week visit between January and February 2016 at the Logic and Semantics Research Group at TU Berlin. Financed by the Science and Technology Scholarship for Short Stays Abroad.

Reviewing Work

I have done peer-reviewing for *Logical Methods in Computer Science*, and the *2023 International Symposium on Mathematical Foundations of Computer Science*.

Internships

- Software Developer at Magnet SA, Chile. April-June 2017.
- Employee at Entel SA, Chile. January, 2012.

Other Interests

Competitive Programming

Problem setter at:

- Chilean qualifiers for IOI - 2024, 2025.
- ICPC Chilean Programming Tournament - 2020, 2024.
- Chilean Olimpiad in Informatics - 2016, 2017.

Achievements as coach:

- Second place (national level) in the *2024 ICPC South America/South Finals*, as a coach of a team from PUC Chile. November, 2024.
- 11th place in the *2024 ICPC Latin America Championship - Programadores de América* as a coach of the team from PUC Chile. Guadalajara, Mexico. March, 2024. This result qualified the team for the 2024 ICPC World Finals.
- First place (national level) and second place overall in the *2023 ICPC South America/South Finals*, as a coach of a team from PUC Chile. October, 2023. This result also qualified the team for the 2024 ICPC Latin America Championship.

- First place (national level) in the *2022 ICPC South America/South Finals*, as a co-coach of a team from PUC Chile. March, 2023. This result also qualified the team for the 2023 ICPC World Finals.
- Second place (national level) in the *2021 ICPC South America/South Finals*, as a coach of a team from PUC Chile. April, 2022.
- First place (national level) in the *2020 ICPC South America/South Finals*, as a coach of a team from PUC Chile. July, 2021.

Achievements as competitor:

- Highest rated programmer among all users from Chile on Codeforces. October, 2022.
- Best place among all competitors in Chile in the Code Jam 2020, organized by Google.
- Best place among all competitors in Chile in the Facebook Hacker Cup 2019.
- Best place among all competitors in Chile in the Code Jam 2017, organized by Google.
- Best place among all competitors in Chile in the Code Jam 2016, organized by Google.
- Second place (national level) in the *2015-2016 ACM-ICPC South America/South Finals* organized by ACM, as a member of a team from PUC Chile. November, 2015.