Curriculum Vitae
Martín Muñoz

I am a postdoctoral researcher at the Millennium Institute for Foundational Research on Data (IMFD) and I am established at Pontificia Universidad Católica de Chile (PUC Chile). I received a PhD in 2025, and a Master's degree along with a professional degree in Computer Engineering in 2017, all 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.

Journal Publications

- Martín Muñoz, Cristian Riveros. *Constant-delay enumeration for SLP-compressed documents.* Logical Methods in Computer Science, Vol. 21, Issue 1 (2025).

- Martín Muñoz, Cristian Riveros. *Streaming Enumeration on Nested Documents.* ACM Transactions on Database Systems, Vol. 49, Issue 4 (2024).

- Marcelo Arenas, Martín Muñoz, Cristian Riveros. *Descriptive Complexity for Counting Complexity Classes.* Logical Methods in Computer Science Vol. 16, Issue 1 (2020).

Conference Publications

- Martín Muñoz, Cristian Riveros. *Constant-delay enumeration for SLP-compressed documents.* 26th International Conference on Database Theory, ICDT 2023.

- Antoine Amarilli, Louis Jachiet, Martin Muñoz, Cristian Riveros. *Efficient enumeration for annotated grammars.* PODS 2022: International Conference on Management of Data, 2022.

    - 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.

- Marcelo Arenas, Martín Muñoz, Cristian Riveros. *Descriptive Complexity for Counting Complexity Classes.* 32nd Annual ACM/IEEE Symposium on Logic in Computer Science, LICS 2017.

Professional Activity

- Postdoctoral Researcher at IMFD, 2025–

- 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. March, 2025.

    - *Output-Linear enumeration for extensions of MSO*. Prof: Cristian Riveros.

- Master in Computer Science, PUC Chile. December, 2017.

    - *Descriptive complexity for counting complexity classes*. Prof: Cristian Riveros and Marcelo Arenas.

- 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 – 2019, 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

- PhD Scholarship given by the IMFD, 2023–2024.

- National PhD Scholarship, National Commission for Scientific and Technological Research, Government of Chile, 2019–2023.

- 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 the journals *Logical Methods in Computer Science*, *Journal of the ACM* and the *Journal of Logic and Computation*; also for the conferences MFCS 2023 and CIAC 2023.

Internships

- Software Developer at Magnet SA, Chile. April–June 2017.

- Employee at Entel SA, Chile. January, 2012.

Other Interests

Competitive Programming

I have been active as a participant in competitive programming contests since 2014, and I was coach of the Competitive Programming Team at PUC Chile from 2019 to 2024. I have been part of the organizing team at three editions of the Chilean Competitive

Programming Winter Camp, and of open programming contests at PUC Chile. I taught the course on competitive programming from PUC Chile's Computer Science curriculum during four semesters in 2023–2024.

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:

- Selected as one of 58 participants of the ICPC Challenge Championship powered by Huawei, held in Shenzhen, China, August, 2023.

- Highest rated programmer among all users from Chile on Codeforces. Several times; the last was on October, 2022.

- Best place among all competitors in Chile at Code Jam, organized by Google, editions 2016, 2017 and 2020.

- Best place among all competitors in Chile at Facebook Hacker Cup 2019.

- 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.