Azul Lihuen Fatalini

Personal Details

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Languages   Spanish (native), English (advanced), Portuguese (advanced), German (intermediate)

Employment

2025-Present   **Research fellow in Set Theory**, University of Leeds, UK.
Postodctoral position. Mentor: Asaf Karagila.

2020–2024   **Research assistant**, Universität Münster, Germany.
Doctoral position (75 % position, salary level E13, TV-L funded by Cluster of Excellence Münster + 25 % position given by Ada Lovelace Fellowship).

Education

2020–2024   **PhD in Mathematics**, Universität Münster, Germany.
Thesis: *Paradoxical sets and the Axiom of Choice*. Advisor: Ralf Schindler.
Grade: magna cum laude. Defense date: 27.09.24.

2019–2020   **PhD student**, National University of Córdoba, Argentina.
CONICET Fellowship. Discontinued to be able to study abroad.

2013–2018   **Licentiate in Mathematics**, *(Bachelor+Master equivalent, 5 years program)*, National University of Córdoba, Argentina.
Thesis: *Hyperbolic plane geometry*. Advisors: Juan Pablo Rossetti (National University of Córdoba) and Peter Doyle (Dartmouth College).
GPA: 9.88/10.

2015–2018   **Teacher of Mathematics**, *(Bachelor's degree, 4 years program)*, National University of Córdoba, Argentina.
GPA: 9.57/10.

Research visits

June 2025   **Research stay as visitant professor**, *with Pedro Sánchez Terraf*, Universidad Nacional de Córdoba, Argentina.
Included giving a minicurse for undergraduate students.

March 2025   **Research stay**, *with Aristotelis Panagiotopoulos*, Universität Wien, Austria.

March 2025   **Research stay**, *with Jindřich Zapletal*, University of Florida, USA.

Sept 2022   **Research stay**, *with Asaf Karagila*, University of Leeds, UK.

Teaching experience

2025-Present   **MATH3001 project supervisor**, University of Leeds.
Supervisor of a group of six students for their MATH3001 project (equivalent to bachelor's thesis) on the topic *Transfinite Induction*.

2017–2019   **Teacher in a Math olympiad workshop**.
Workshop at a school, destined to primary and high school students who want to train for mathematical olympiads.

2016–2018, 2020   **Teaching Assistant**, at National University of Córdoba.
Hired by the Math Department.

List of publications

- A. Fatalini and R. Schindler, *The transcendence degree of the reals over certain set-theoretical subfields*, arXiv:2501.00616, Journal of Symbolic Logic, 2025.
- A. Fatalini, *Partitions of $\mathbb{R}^3$ into unit circles with no well-ordering of the reals*, arXiv:2501.03131, accepted to appear in Transactions of the American Mathematical Society.
- A. Fatalini and L. Serafin, *Funicular preorders can be prelinearized without free ultrafilters over $\mathbb{N}$*, arXiv:??, submitted.
- A. Fatalini, *Thesis abstract*, Bulletin of Symbolic Logic, 2025.

Awards and Honors

2024   **Recognition of doctoral excellence**, *among the doctoral theses in logic in the last two years from the German-speaking research community.*

2018   **Honorable Mention in the Competencia Interuniversitaria Matemática Argentina (CIMA)**, *CIMA is a Mathematical Olympiad for undergraduates.*
Team with M. Hunicken

2017   **Second best GPA**, *out of all fourth-year students in the fields of Math, Physics, Computer Science and Astronomy at the National University of Córdoba.*

2017   **Excellence Award Luis Pasteur**.
Monetary award given by Obra Social Luis Pasteur to the 20 best GPAs that entered the national contest.

2016, 2015   **First place in the CIMA**.
Team with L. Ferroni

2013   **Honorable mention and "Most original solution" in the CIMA**.
Team with L. Ferroni

2012   **Honorable Mention in the 53rd International Mathematical Olympiad (IMO)**.

Institutional Activities

2026-Present   **Postdoc representative**, *at the Maths Strategy Committee*, University of Leeds.

2025   **Member**, *round table on Equity, Diversity and Inclusion in Mathematics*, at the Inclusion, Diversity, and Equity in Algebra (IDEAL) Meeting, University of Leeds.

2023   **Member**, *of the Equal Opportunity Committee*, Universität Münster.
This role involved organization of different events for May 12 and the organization of regular lunches with FLINTA people from the department.

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2021-2022   **Mentor**, *as part of the MINT mentorship program for women master students*, Universität Münster.

2017–2019   **Organizer**, *of different institutional events of the Math Department*, National University of Córdoba.

2015-2018   **Representative of undergraduate Math students**, *in the Mathematics Council*, National University of Córdoba.

Conferences and Seminars

Conferences as invited speaker

July 2026   **Invited speaker**, *15th Panhellenic Logic Symposium*, Athens, Greece.

2025   **Invited speaker**, *Young Set Theory Workshop*, Vienna, Austria.

2025   **Invited speaker**, *Annual 2025 ÖMG-DMV Meeting (Symposium on Set Theory of the reals)*, Linz, Austria.

2025   **Invited speaker**, *SEALS Conference*, Gainesville, USA.

2025   **Invited speaker**, *Young Topology and Set Theory Meeting (online)*, Catania, Italy.

2024   **Invited speaker**, *120 Years of Choice*, Leeds, UK.

2022   **Invited speaker**, *Set Theory in the UK*, Leeds, UK.

Other conferences

June 2026   **Attendee**, *Simons Semester (Gödel's program)*, Będlewo/Warsaw, Poland.

2025   **Speaker**, *XVIII International Workshop in Set Theory*, Marseille, France.

2025   **Attendee**, *The Vienna Oracle of Set Theory (VOrST)*, Vienna, Austria.

2024   **Attendee**, *European Set Theory Conference*, Münster, Germany.

2024   **Attendee**, *Determinacy, Inner Models, and Forcing Axioms*, Vienna, Austria.

2024   **Poster presenter**, *Young Set Theory Workshop*, Budapest, Hungary.

2023   **Attendee**, *Perspectives in Set Theory*, Warsaw, Poland.

2023   **Speaker and poster presenter**, *PhDs in Logic XIV*, Granada, Spain.

2023   **Speaker**, *Winter school: Section set theory and topology*, Štěkeň, Czech Republic.

2022   **Attendee**, *CHEESE Workshop (Choiceless Elementary Embeddings of Sets)*, Leeds, UK.

2022   **Attendee**, *European Set Theory Conference*, Turin, Italy.

2022   **Speaker**, *5th Münster conference on inner model theory*, Münster, Germany.

2022   **Speaker**, *Winter school: Section set theory and topology*, Hejnice, Czech Republic.

2021   **Attendee**, *XVI International Luminy Workshop in Set Theory*, CIRM, Marseille, France.

2021   **Attendee (online)**, *RIMS Workshop "Recent Developments in Set Theory of the Reals"*, Kyoto University, Japan.

2015–2019   **Attendee**, *of the five annual meetings of the Argentinian Mathematical Union that took place in those years*, Argentina.

Seminar talks

2026   **Invited speaker**, *Séminaire Général de Logique*, Institut de Mathématiques de Jussieu - Paris Rive Gauche, France.

2025   **Invited speaker**, *Logic Seminar*, University of Manchester, UK.

2025   **Invited speaker**, *Logic Working Group Seminar*, University of Turin, Italy.

2025   **Invited speaker**, *KGRC Set Theory Seminar*, University of Vienna, Austria.

2025   **Invited speaker**, *KGRC Logic Colloquium*, University of Vienna, Austria.

2024   **Invited speaker (online)**, *Logic student meeting (Posetting II)*, National University of Córdoba, Argentina.

2024   **Invited speaker (online)**, *Descriptive Dynamics and Combinatorics Seminar*, Montreal, Canada.

2024   **Invited speaker**, *Celebrating Women in Math day*, Bielefeld University, Germany.

2020   **Invited speaker (online)**, *Seminar of graduate students*, National University of Chile.

2016-2023	**Speaker**, *on the topics "Euclides vs Cantor"(2023), "Forcing paradoxical sets"(2021) "Combinatorics: Ramsey theory and random graphs"(2019), "Hyperbolic plane geometry: area of polygons"(2018), "The art of solving math problems" (2016)*, Seminar of graduate students, National University of Córdoba.

Organization of conferences or seminars

Sept 2026	**Organizer**, *FLINTA in Set Theory conference*, Vienna, Austria.
May 2026	**Organizer**, *ROBUST Models workshop*, Leeds, UK.
2023	**Local organizer**, *Young Set Theory workshop*, Münster, Germany.
2023	**Organizer**, *of the PhD Seminar of Set Theory*, Universität Münster.
2022	**Organizer**, *of the Seminar of graduate students*, Universität Münster.
2020	**Organizer**, *of the Seminar of graduate students*, National University of Córdoba.

▬▬▬ Others

2025-Present	**Member of the jury for the CIMA**, Argentina.
	CIMA is the national mathematical olympiad for undergraduates.
2025	**Member of the jury for the UMA essay contest**, Argentina.
	This is a national math essay contest for undergraduates.
2024	**Podcast appearence**, *in the third episode of the podcast "On a tangent"*.
	This is a podcast about the stories behind the mathematics, in which the host interviews early career researchers of Mathematics Münster.
2017	**Collaborator**, *with the (partial) translation from English to Spanish of the book "A singular mathematical Promenade" by Étienne Ghys*, IMPA, Rio de Janeiro.
2013-2017	**Student grant**, *thanks to Retama Foundation*.
	Retama is a private foundation that awards scholarships to outstanding high school students who have to move to another city for university studies.

Argentinian Mathematical Olympiad (OMA)

2019	**Member of the jury for the national competition**.
2018, 2019	**Member of the jury for several regional competitions**.
2015, 2018, 2019	**Member of the jury for the national competition "Mateclubes"**.
	Mateclubes is an Argentinian Mathematical Olympiad organized by teams.
2011–2019	**Collaborator**, *of the Argentinian Mathematical Olympiad Foundation*, in regional, national and international competitions such as:.

- Southern Cone Olympiad 2016
- Ibero-American Olympiad 2017
- Río de La Plata Olympiad 2018 and 2019