

Saúl Rodríguez Martín

Contact Information

Department of Mathematics
The Ohio State University
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Teaching experience

- Graduate Teaching Associate, The Ohio State University, 2023 - Present.
- Teaching Associate for V. Bergelson's minicourse in the Northwestern University Trends in Ergodic Theory Summer School, 2024.
- Directed Reading Project (DRP) at OSU, mentoring Sebastian Ghilezan in the basics of differential geometry of curves and surfaces.

Education

- Pursuing Ph.D. in mathematics under the guidance of Prof. Vitaly Bergelson, The Ohio State University, 2022 - Present.
- Master of Advanced Study, University of Cambridge, 2021 - 2022.
Master thesis: *Outer Space*. Directed by Henry Wilton.
- Degree in Mathematics, Complutense University of Madrid, 2017 - 2021.
Undergraduate thesis: *Topological characterization of some singular subspaces of the real line. Important applications in General Topology*. Directed by María Isabel Garrido.

Grants, honours and Awards

- Merit-based academic support during graduate studies at The Ohio State University:
 - Special Graduate Assignment, Spring 2026.
 - Research support for paper writing under F. Mémoli, Spring 2024.
- First Prize in the International Mathematical Competition for University Students, 2021.
- Collaboration with University Departments Grants (Becas de Colaboración con Departamentos Universitarios), 2020.
- Excellence Grants of the Autonomous Community of Madrid (Becas de Excelencia de la Comunidad de Madrid) for undergraduate students, 2018, 2019, 2020.
- Gold Medals in the Spanish Mathematical Olympiad and the Spanish Physics Olympiad, 2017.

Research Papers

1. S. Rodríguez Martín. *An inverse of Furstenberg's correspondence principle and applications to van der Corput sets*. Trans. Am. Math. Soc., 2025.
2. S. Rodríguez Martín. *Some novel constructions of optimal Gromov-Hausdorff-optimal correspondences between spheres*. arXiv preprint, [arXiv:2409.02248](https://arxiv.org/abs/2409.02248), 2024.

3. S. Rodríguez Martín. *Gromov-Hausdorff distances from simply connected geodesic spaces to the circle*. Proc. Amer. Math. Soc. Ser. B 11 (2024), 624–637.
4. A. Della Corte, M. Farotti, S. Rodríguez Martín. *Competing holes in open dynamical systems*. Proc. Amer. Math. Soc., 2024.

Selected talks

1. Bernoulli Center - Summer School on Additive Combinatorics, Number Theory and Ergodic Theory, 15 July 2025. *Dynamical generalizations of the prime number theorem and disjointness of additive and multiplicative semigroup actions*.
2. Rutgers Math and Data Seminar, 27 March 2025. *Gromov-Hausdorff distance and its connection to topology*.
3. Ohio State University - What is...? Seminar, 11 June 2024. *What is non-standard analysis?*
4. Ohio State University - Topology, Geometry and Data Seminar, 16 April 2024. *Gromov-Hausdorff distances from simply connected geodesic spaces to \mathbb{S}^1* .
5. Ohio State University - What is...? Seminar, 20 June 2023. *What are Cantor Spaces?*
6. Universidad Complutense de Madrid - Dedekind's Army project, 6 April 2022. *El Teorema de Banach-Tarski*.

Other presentations

1. Ohio State University Ergodic Ramsey Theory student seminar, 31 October 2025. *Sumsets in \mathbb{N}* .
2. Ohio State University reading classics seminar, 23 September 2025. *Early History of Convexity*.
3. Ohio State University - What is...? Seminar, 5 June 2025. *What are smooth bump functions?*
4. Ohio State University Ergodic Ramsey Theory student seminar, 24 February 2025. *An inverse of Furstenberg's correspondence principle*.
5. Ohio State University Ergodic Ramsey Theory student seminar, 25 October 2024. *Loeb measures. Applications in Ergodic Ramsey Theory*.
6. Ohio State University Topology, Geometry and Data Seminar, 1 October 2024. *Some novel constructions of Gromov-Hausdorff-optimal correspondences between spheres*.
7. Ohio State University Reading Classics seminar, 6 February 2024. *Who proved the Fundamental Theorem of Algebra?*
8. Ohio State University Reading Classics seminar, 7 November 2023. *Euler's Essay on Continued Fractions*.