



# Carlos Ospina

CONTACT INFORMATION	Department of Mathematics University of Utah Salt Lake City, UT 84112	 <a href="https://CarlosOspinaMath.github.io">https://CarlosOspinaMath.github.io</a>  <a href="mailto:ospina@math.utah.edu">ospina@math.utah.edu</a>
CURRENT POSITION	<b>Graduate Teaching Assistant</b> University of Utah, Salt Lake City, USA	Aug 2019 - May 2025
RESEARCH INTERESTS	My research interests are dynamical systems and ergodic theory —particularly studying dynamics on translation surfaces and their strata, interval exchange transformations and entropy.	
EDUCATION	<b>University of Utah</b> , Salt Lake City, USA Ph.D. in Mathematics (Advisor: Jon Chaika)	Aug 2019 - May 2025
	<b>International Centre for Theoretical Physics ICTP</b> , Trieste, Italy Postgraduate Diploma in Mathematics (Advisor: Emmanuel Carneiro)	Sep 2018 - Aug 2019
	<b>Universidad Nacional de Colombia</b> , Manizales, Colombia M.Sc. in Applied Mathematics (Advisor: Juan Carlos Riaño)	Jan 2015 - Jan 2017
	<b>Universidad Nacional de Colombia</b> , Manizales, Colombia B.Sc. in Mathematics	Jan 2010- Dec 2014
PUBLICATIONS & PREPRINTS	<p><b>4. Coboundaries of 3-IETs</b> (with P. Berk) <i>Submitted</i>. Available at: <a href="https://arxiv.org/abs/2501.06380">arXiv:2501.06380</a> [math.DS] (2025)</p> <p><b>3. Some real Rel trajectories in <math>\mathcal{H}(1, 1)</math> that are not recurrent</b> <i>Submitted</i>. Available at: <a href="https://arxiv.org/abs/2406.07495">arXiv:2406.07495</a> [math.DS] (2024)</p> <p><b>2. Slow entropy and variational dynamical systems</b> <i>Mathematics Research Reports</i>, <b>6</b> (2025), pp. 17-49 (with M. Cheng, K. Vinhage, and Y. Zhai)</p> <p><b>1. Thurston's Theorem: Entropy in Dimension One</b> <i>Math. Res. Lett.</i> <b>31</b> (2024), no. 1, pp. 127-174 (with R. Dickmann, G. Domat, T. Hill, S. Kwak, P. Patel, and R. Rechkin)</p>	
MENTORING & SERVICE	<p><b>Pares Ordenados</b>. Virtual reading program in mathematics dedicated to Spanish-speaking students. Mentor and co-organizer. <a href="https://ninyam.github.io/paresordenados">ninyam.github.io/paresordenados</a> Jan 2023 - Jun 2024</p> <p><b>Ergodic Theory and Dynamical Systems Seminar</b>. Co-organizer Aug 2024 - Jan 2025</p> <p><b>AWM mentoring network</b>. Mentor Aug 2023 - Jun 2024</p> <p><b>Geometry, Topology and Dynamics Grad Student Seminar</b>. Co-organizer Aug 2022 - Jun 2023</p>	
TEACHING	UNIVERSITY OF UTAH:	
	<b>Business Algebra</b> , Instructor	Fall 2024
	<b>Business Algebra</b> (Online), Instructor	Summer 2024
	<b>Business Algebra</b> , Instructor	Fall 2023
	<b>Pre-REU: Approximately Rational Numbers and Continued Fractions</b> , TA	Summer 2023
	<b>Trigonometry</b> , Instructor	Fall 2022
	<b>Calculus I</b> , Instructor	Fall 2021
	<b>Pre-REU: Hidden Structure and Computation</b> , TA	Summer 2021
	<b>Business Algebra</b> (Online), Instructor	Fall 2020

	<b>Calculus II (Online), Instructor</b>	Summer 2020
	<b>Engineering Calculus II, TA</b>	Spring 2020
	<b>Engineering Calculus I, TA</b>	Fall 2019
TALKS	<b>Some real Rel trajectories in <math>\mathcal{H}(1, 1)</math> are not recurrent</b> University of Zurich	Jun 2024
	<b>Some real Rel trajectories in <math>\mathcal{H}(1, 1)</math> are not recurrent</b> <i>Group Actions Seminar</i> , University of California, San Diego	May 2024
	<b>Some real Rel trajectories in <math>\mathcal{H}(1, 1)</math> are not recurrent</b> <i>Max Dehn Seminar</i> , University of Utah	Apr 2024
	<b>Some real Rel trajectories in <math>\mathcal{H}(1, 1)</math> are not recurrent</b> <i>School on Flat Surfaces and Interactions</i> , Le Teich, France	Mar 2024
	<b>Slow Entropy of Sturmian Shifts and 3-IETs</b> <i>Utah Dynamics Mini-Workshop</i> , University of Utah	Dec 2023
	<b>Real Rel Flow</b> <i>Wasatch Topology Conference</i> , University of Utah	Oct 2023
	<b>Regularity of the Cohomological Equation for Circle Rotations</b> <i>Online Working Seminar</i> , University of Utah	Apr 2023
	<b>Interval Exchange Transformations &amp; Translation Surfaces</b> <i>Geometry, Topology and Dynamics Grad Student Seminar</i> , University of Utah	Feb 2023
	<b>The Three Gap Theorem</b> <i>Geometry, Topology and Dynamics Grad Student Seminar</i> , University of Utah	Oct 2022
	<b>Maximal Functions</b> <i>Analysis Seminar</i> , University of Utah	Oct 2022
Summer Schools, Conferences & Research Communities	<b>Recent Trends in Homogeneous and Teichmuller Dynamics</b> Brin Institute of Mathematics	Sep 2024
	<b>NU Trends in Ergodic Theory</b> Northwestern University	Jul 2024
	<b>New Frontiers in Parabolic Dynamics and Renormalization</b> University of Bologna	Jun 2024
	<b>School on Flat Surfaces and Interactions</b> Le Teich	Mar 2024
	<b>Wasatch Topology Conference</b> University of Utah	Oct 2023
	<b>Dynamics Summer School</b> Northwestern University	Jun 2023
	<b>Big Ideas in Dynamics. An Online Research Community</b> AIM	Spring 2023
	<b>Combinatorics, Dynamics and Geometry on Moduli Spaces</b> CIRM	Sep 2022
	<b>Wasatch Topology Conference</b> University of Utah	Aug 2022
	<b>Houston Workshop in Hyperbolic Dynamics</b> University of Houston	Jun 2022
	<b>Ergodic Theory and its Connections: A Conference in Honor of the Legacy of Michael Boshernitzan</b> Rice University	Jun 2022