

Latinxs and Hispanics in Mathematical Sciences



Photo courtesy of Dr. Cristina Sabando Alvarez

"To me, Hispanic Heritage Month is a reminder that our identities and languages are not separate from our academic pursuits—they are assets. As a native Spanish speaker and a combinatorialist, contar allows me to see mathematics as both a structural science and a human narrative where every story matters."

Dr. Cristina Sabando Alvarez

Postdoctoral Teaching Development Fellow
University of Virginia

Cristina Sabando Alvarez views mathematics as a deeply collaborative, human endeavor. Originally from Ecuador, she earned her undergraduate degree at Yachay Tech University. Her mathematical journey had its challenges; a period away from her studies tested her confidence, but an introductory course in abstract algebra became a powerful inflection point, rekindling her love for the discipline. A transformative experience at the Días de Combinatoria school in Colombia deepened her passion for the interplay between algebra and combinatorics, leading to an undergraduate thesis on poset structures under the mentorship of Professor Miguel Méndez. She earned an A.M. in Mathematics in 2023 and her Ph.D. in Mathematics in 2026 from Washington University in St. Louis under the supervision of Dr. Martha Precup. During her doctoral studies, she was a McDonnell International Scholar Academy Fellow and a recipient of the Sylvia T. Bozeman Predoctoral Fellowship (2024). Her research explores algebraic and enumerative combinatorics at the intersection of geometry, focusing on Springer fibers, Hessenberg varieties, and Schubert calculus. In August 2026, she will begin a Post-Doctoral Teaching Development Fellowship in Applied Mathematics at the University of Virginia.

As a native Spanish speaker, Cristina's native language deeply shapes her mathematical approach to counting. For her, to *contar* is simultaneously a mathematical act and a deeply human one—enumerating structures while listening to and honoring stories. This multidimensional perspective permeates her work as both a researcher and an educator. Drawing inspiration from Federico Ardila's article "Todos Cuentan," which powerfully affirms that everyone counts, she works to build grace-based, inclusive mathematical communities.

Having navigated her own academic challenges, Maria Cristina teaches with deep care, welcoming mistakes as essential to the learning process—an approach recognized with the Brian Blank and Robert H. McDowell Teaching Awards. Committed to evidence-based pedagogy, she participated in the Professional Development in Teaching Program hosted by the WashU Center for Teaching and Learning (CTL), earning the level of Innovator and receiving a Teaching Citation. Through the CTL, she further advanced her pedagogical development and contributed to university-wide teaching initiatives. She also co-founded Math Chats, a space for students in the Math Department at WashU to get to know each other and faculty outside of a classroom setting. For her, mathematics becomes most accessible when woven with narrative. While communicating complex ideas is always a challenge, it turns beautiful when approached as a story. Whether researching intricate combinatorial structures or mentoring students, she seeks to ensure that *todos cuentan*—we count every story.

Lathisms was founded in 2016 in order to showcase the contributions of Latinx and Hispanic mathematicians during Hispanic Heritage Month, which is celebrated in the United States from September 15 and October 15 every year. During this time, we feature/reveal a prominent Latinx/Hispanic mathematician daily. See all the featured mathematical scientists at LATHISMS.ORG.

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