

Latinxs and Hispanics in Mathematical Sciences



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"For me, Hispanic Heritage Month means the opportunity to express my gratitude to all the Latinos and Hispanics who have paved the way for our community. It is a time to showcase to the world the vital contributions that our community makes in the sciences, the arts, and all other areas of life that propel society toward greater well-being. Ultimately, it is a chance to proudly embrace our rich cultural heritage and share it with the rest of the world."

Camilo is a first-generation college student and Ph.D. candidate in mathematics at Oklahoma State University, with graduation anticipated in May 2027. Raised in a lower-middle-income family in Armenia, Quindío, Colombia, his early life was shaped by profound challenges, notably navigating structural uncertainty and rebuilding resilience after a devastating earthquake in 1999 destroyed the Quindío region. Driven by a powerful affinity for mathematics, he worked in technology and engineering roles during his early twenties. He eventually pursued formal studies at the Universidad del Quindío, where he earned his undergraduate degree in mathematics and education (Licenciatura en Matemáticas). Recognizing his potential, Camilo was selected as a beneficiary of the EducationUSA Opportunity Funds program in 2018. This vital support enabled him to transition to graduate studies in the United States at Oklahoma State University, where he successfully completed his master's degree and made his transition to doctoral research.

Under the guidance of Professor Edward Richmond, Camilo's current research in algebraic combinatorics centers on embeddings of Coxeter groups arising from foldings of Coxeter graphs. He studies these maps via the unfolding series, a generating function recording the exact distribution of lengths of unfolded elements inside the ambient group. He has shown that these series have uniform, closed-form product factorizations into q -integers for all classical, dihedral, and affine foldings involving infinite families of irreducible Coxeter groups. His current work investigates the combinatorial structure of the resulting quotient space, analyzing how a single coset can possess multiple representatives of minimal length. Utilizing computational algebra tools such as SageMath, his work systematically classifies complex systems into distinct structural families and their corresponding polynomial invariants.

Paralleling his research, Camilo's teaching experience records over seven years of teaching service in Colombia and the United States. He has served as the instructor for essential undergraduate tracks and helped with coordination duties managing administration and assessment tracking for large-scale courses with over 500 students across 20 course sections. His leadership extends to designing and executing full lecture, assignment, and evaluation architectures for intensive Summer Bridge programs, preparing incoming freshmen for the rigors of college-level mathematics. Camilo's teaching approach is grounded in the belief that mathematical understanding develops through a deliberate interplay of intuition, representation, and formalization, and that all students can engage meaningfully with mathematics when given the right structures and support. Rejecting rote memorization, his classroom becomes a place where students feel comfortable experimenting, making mistakes, and refining their arguments, so procedural fluency emerges naturally from structural logic.

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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