

Latinxs and Hispanics in Mathematical Sciences



Anthony Sanchez

Anthony Sanchez is a graduate student at the University of Washington entering the final year of his Ph.D. He was born and raised in Phoenix, Arizona, after his parents immigrated to the United States. His father immigrated from Colombia and his mother from Mexico. Anthony would go on to be a first-generation college student in mathematics at Arizona State University. At the conclusion of his bachelor's degree, he was awarded a National Science Foundation graduate research fellowship before entering graduate school at the University of Illinois at Urbana-Champaign. He received a master's degree there before relocating to the Pacific Northwest at the University of Washington following his advisor, Jayadev Athreya.

Anthony's research lies at the intersection of geometry and dynamical systems. He studies questions concerning a geometric object called a "translation surface." Anthony's research concerns what it is like to run around other shapes (that give rise to curved worlds). Unusual things happen on translation surfaces that differ from our day-to-day experience. For example, imagine you are on a translation surface looking at a picture and suppose you decide to start spinning around. In our usual experience, you would only have to spin once to spot the picture again. However, on a translation surface it may be the case that you will have to spin around several times before your eyes see the picture that you were staring at originally!

Anthony has a passion for participating in programs that make mathematics accessible. Two such programs that Anthony has served as a mentor for are the Washington Experimental Laboratory (WXML) and the Washington Directed Reading program (WDRP).

The WXML consists of a team of undergraduates, a graduate mentor, and a faculty mentor working on a research project. Anthony enjoys this program because it introduces undergraduates to mathematics research through projects that are very hands on and computational. The WDRP pairs an undergraduate with a graduate mentor for a quarter to read about math topics outside of the standard curriculum. Anthony's past projects have often been in probability (such as Markov Chains or Limit Laws) because probability is an incredibly useful tool for students who continue in either academia or industry. Because some projects require more pre-requisites and unintentionally can limit students of diverse backgrounds from participating, Anthony alternates the pre-requisites needed each quarter to open this opportunity to as many students as possible.

"Hispanic Heritage Month means a time for me to reflect on the evolution of my family. It is a time where I can appreciate the sacrifices my parents made to give their children a better tomorrow. Sacrifices like having to adapt to a foreign language and culture. Sacrifices like having to take jobs with little pay to put food on the table. Sacrifices like having to walk across a hot desert with little water as a teenager. It reminds me that my Ph.D. was only made possible by their sacrifices and Hispanic Heritage Month means a time to thank them."

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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