

# Latinxs and Hispanics in the Mathematical Sciences



*"[Hispanic Heritage Month] means being proud of where you come from, of your language, culture, and family. Immigrants rejecting the past tendency of complete assimilation at the expense of their past and connections."*

## Alejandro Ochoa

Assistant Professor, Duke University

Alex was born in El Paso, Texas but grew up across the border in Ciudad Juárez, México. His longstanding interests in music performance and languages started there. He was always good at math but started loving theory and proofs when he participated in the Mexican Math Olympiad and was among the top 15 students in the national exam of 2002. He then started getting interested in applications of math in biology, which motivated him to earn a Biology and Math double degree from MIT. Alex participated in undergraduate research in computational protein design. He fell in love with research, so he pursued other computational biology projects for his PhD in Molecular Biology at Princeton University, focused on statistical and probabilistic models of protein domain family prediction. During graduate school, he was also in a student rock band, and got married and had two kids. He then completed a postdoctoral position also at Princeton but now pursuing problems in statistical genetics, which is his current focus now as an Assistant Professor at Duke University. Alex leads a research lab focused on developing statistical and computational methods and applying it to patient and other datasets.

Alex's research is multidisciplinary, combining knowledge and methods from mathematics, computer science, and biology. Most projects include a combination of all three: a new method born out of statistical models and calculations, which is implemented efficiently in a user-friendly and publicly available R package, and which is validated using simulations and then applied to real datasets in order to discover new biology. Alex advises students, "Pursue your interests and passions, but also adapt to take advantage of the opportunities around you, since research agendas are always changing. Be open to new experiences, explore." Additionally, he encourages students, "Also, don't give up your hobbies, family time, and general mental well-being: many scientists are told to be all in on research to be competitive, but I didn't listen to them and have made it this far anyway!"

---

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](https://lathisms.org).

*Thanks to the American Mathematical Society and the Mathematical Association of America for support of Lathisms.*