

Latinxs and Hispanics in Mathematical Sciences



Photo courtesy of UT Southwestern Medical Center

"Hispanic Heritage Month is meaningful and personal, because it represents the culture and community that shaped who I am today. Growing up in South Texas, being Hispanic was simply part of everyday life, I rarely thought about what being Hispanic meant or the importance of representation. It was not until leaving that community that I began to recognize its significance. Through involvement at UW and national organizations, I saw how powerful it can be to encounter mentors and leaders who share similar names, backgrounds, and experiences. I strive to be that representation for others, regardless of where their path begins."

Dr. Jorge Cisneros Paz

Research Instructor

UT Southwestern Medical Center

Jorge Cisneros Paz PhD is a Research Instructor in the Department of Internal Medicine at UT Southwestern Medical Center. He earned his BS in Mathematics and Physics from The University of Texas Rio Grande Valley, followed by a PhD in Applied Mathematics from The University of Washington in 2022. Soon after, Jorge was a Postdoctoral Fellow in the Department of Biomedical Engineering at The University of Texas at Austin. His research interests focus on data-driven techniques, deep learning, image analysis, numerical analysis, and optimization methods. Presently, his efforts are centered on developing math models and deep learning methods for echocardiography and early detection of heart failure.

His engagement with math research began during his first year of undergraduate study, when he investigated ordinary differential equation that model blood flow. During his PhD at UW, he developed hybrid analytical-numerical methods for solving nonlinear partial differential equations, strengthening his foundation in mathematical modeling, numerical methods, and scientific computation. He further expanded this perspective through internships in optimization at Argonne National Laboratory and computational pharmacology at Genentech.

As an ORISE Research Fellow working with the National Science Foundation and US Census Bureau, Jorge spent five years developing machine-learning methods for generating synthetic data for the Annual Business Survey. This experience connected mathematical modeling and statistical learning with large-scale national data. Combined with his experience at Genentech, this work shaped his vision of applying mathematical and computational methods across biomedical research, where they could have meaningful and direct societal impact.

In addition to research, Jorge is committed to mentoring the next generation of scientists and strengthening the mathematical sciences community. He has mentored undergraduate, graduate, and medical students in mathematical and computational research and has lectured in math-heavy computational courses at UT Austin. He has also participated in national conference panels and professional organizations including the Math Alliance, SIAM, SACNAS, SPIE, BMES, and the Joint Mathematics Meetings, with a particular interest in broadening participation in the mathematical sciences. He has led STEM educational events at secondary schools and museums, sharing the relevance and excitement of mathematics with students from diverse academic and personal backgrounds.

Collectively, Jorge's career demonstrates a sustained progression from fundamental mathematical modeling to modern computational methods addressing important scientific and biomedical problems, complemented by a commitment to mentoring, outreach, and strengthening the mathematical sciences community.

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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