

# Latinxs and Hispanics in Mathematical Sciences



Photo courtesy of Arnaldo Rodríguez González

*"Hispanic Heritage Month is an opportunity to reflect on the challenges we, and those who came before us, have faced; to feel joy in our collective accomplishments in spite of those challenges; and to motivate us to seek positive change and improve the livelihoods of those who will come after us. We are blessed that Hispanicity is a broad tent—it includes the heritage and culture of countless many different countries—and this month is a chance for us to make that tent as welcoming as possible."*

## Dr. Arnaldo Rodríguez González

Assistant Professor of Teaching  
State University of New York at Buffalo

Arnaldo Rodríguez González was born and raised in San Juan, Puerto Rico. Although he was not primarily interested in mathematics at a young age, he discovered his passion for it while obtaining a mechanical engineering bachelor's degree in the University of Puerto Rico at Mayagüez. During this time, he was fortunate enough to participate in various internships at the intersection of applied mathematics, physics, and engineering, in places such as Fermilab, the Caltech division of the LIGO project, and the Laboratori Nazionali del Gran Sasso complex in Italy. After finishing his bachelor's degree magna cum laude with a minor in applied mathematics, he briefly worked as a rheologist in HP's now-defunct ink processing plant in Aguadilla, Puerto Rico, before spending a year in a post-baccalaureate program at Berkeley Lab's Accelerator Technology and Applied Physics division. Afterwards, he obtained a Ph.D. in theoretical and applied mechanics at Cornell University; where among many other things he strengthened his passion for teaching, and received the H. D. Block Teaching Prize twice for excellence as a teaching assistant in engineering mathematics and mechanics. After leaving Cornell, he joined the faculty in the State University of New York at Buffalo's mechanical engineering department, where he is currently an assistant professor of teaching.

Arnaldo's primary research interests involve the mathematical modeling of continuum dynamical systems, with particular focus on the qualitative encoding of their dynamics into extensions of formal languages and how the computational complexity of these encodings relates to the presence of chaotic phenomena within them. He is also passionate about understanding and modeling counter-intuitive dynamical behavior in micro- and nanoscale fluid flows, and wants to improve dynamical models of thermoregulation and heat transfer from the human body in high-humidity climates.

Arnaldo is deeply invested in teaching and the dissemination of free learning resources in STEM; to this end, he wrote the Commentary on Fluid Mechanics and Qualitative Dynamics and Chaos, two free textbooks on fluid mechanics and symbolic dynamics respectively, and recorded a lecture series titled Commentary on Heat Transfer that is freely available on YouTube. He also cares deeply about community in STEM spaces; he briefly ran the Applied Dynamics Seminar at Cornell, a space where junior applied mathematicians within all fields of science could discuss their work in a friendly environment, and he routinely provides talks on career advancement for the local Society of Hispanic Professional Engineers' student chapter in the University at Buffalo. He is proud to mentor a diverse population of students in STEM both within the University at Buffalo and beyond, including those from his birthplace of Puerto Rico.

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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).

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