

Latinxs and Hispanics in Mathematical Sciences



Photo courtesy of Dr. José L. Ramírez

Dr. José Luis Ramírez

Professor of Mathematics
Universidad Nacional de Colombia

José Luis Ramírez is a Colombian mathematician and professor in the Department of Mathematics at Universidad Nacional de Colombia in Bogotá. Together with his two brothers, José was part of the first generation in his family to attend university, an opportunity made possible in large part by public education and by the perseverance and support of his family. He earned his undergraduate degree in Mathematics from Universidad Pedagógica Nacional and later his master's and Ph.D. degrees from Universidad Nacional de Colombia. During his doctoral studies, he explored connections between theoretical computer science, particularly automata and formal languages, and enumerative combinatorics, using these connections to study discrete structures.

"Although Hispanic Heritage Month is not celebrated in Colombia, I value the opportunity it provides to recognize the richness of our histories, cultures, and contributions, and to reflect on the role that education can play in creating opportunities for future generations."

His research focuses primarily on enumerative combinatorics. A recurring theme in his work is understanding why apparently different discrete structures exhibit the same enumerative behavior. He combines bijective, algebraic, analytic, and computational methods to derive generating functions, exact and asymptotic counting formulas, investigate combinatorial statistics, and construct bijections that reveal structural connections between different families of objects. His research has also been enriched by academic and research visits to institutions such as Université de Bourgogne in France and the University of Sopron in Hungary.

An important part of José's academic work is introducing students to mathematical research. He has always viewed education as one of the most powerful drivers of social mobility, particularly in Colombia, and sees creating opportunities for the next generation as a meaningful way to give back to society. This belief has shaped his commitment to mentoring students and involving them in research early in their mathematical education. He has supervised numerous undergraduate and graduate research projects, with particular interest in problems that allow young mathematicians to move naturally from experimentation and examples to conjectures and original research.

Beyond his research and mentoring, José has worked to strengthen the mathematical community through undergraduate research programs, mathematical circles, seminars, and the organization of conferences and workshops. He currently serves as an editor of The Ramanujan Journal and Enumerative Combinatorics and Applications. Through these activities, he seeks to foster collaboration and to connect students and young researchers with the broader international mathematical 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.

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