Latinxs and Hispanics in Mathematical Sciences

Dr. Monica García

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Photo courtesy of Maria Abad Aldonza

"Hispanic Heritage Month represents, to me, an opportunity to celebrate and thank the commitment and hard work of our colleagues from previous generations who paved the way for a new generation of Hispanic and Latinx researchers to access and thrive in the mathematical research environment. Without their efforts, many of us wouldn't be here. This month reminds me that we stand on their shoulders — and that we have a responsibility to continue opening doors for others."

Monica García was born and raised in Aguascalientes, a small state in north-central Mexico. She became the first member of her family to pursue a career in science when she enrolled in a BSc in Applied Mathematics at the Universidad Autónoma de Aguascalientes. Her participation in both Mexican and international summer research programs solidified her interest in algebra and combinatorics, and awakened her desire to become a researcher.

She was one of the recipients of the Sophie Germain Scholarship from the Fondation Mathématique Jacques Hadamard, which allowed her to pursue a master's degree in Pure Mathematics at Paris-Saclay University, in the southern suburbs of Paris. She remained in the Paris region to complete a Ph.D. in representation theory under the supervision of Pierre-Guy Plamondon at the University of Versailles Saint-Quentin-en-Yvelines. She is now a first-year postdoctoral researcher at the Laboratoire d'Algèbre, de Combinatoire et d'Informatique Mathématique (LACIM) in Montreal and Quebec - the same lab where she once interned as an undergraduate, and where she now mentors students embarking on journeys like her own.

Monica's research focuses on the combinatorial, geometric, and algebraic aspects of the representation theory of associative algebras. She studies algebraic structures related to the additive categorification of cluster algebras, such as tau-rigid objects, torsion classes, and semistable modules. Her expertise lies in the extriangulated category of two-term complexes of projective modules, and she has extended key results from tau-tilting theory to this context.

Throughout her career, Monica has benefited from the support of the mathematical community and from initiatives that aim to expand access to opportunities for underrepresented groups in mathematics. She is committed to contributing to these efforts through service and organization. During her Ph.D., she was an elected member of the council of the Graduate School of Mathematics at Paris-Saclay University. In that role, she led the development of a welcoming program for international mathematics students, drawing from her own experience of moving abroad and adapting to a new culture and language.

She has also co-organized research summer schools in both algebraic geometry and representation theory, with the goal of creating accessible spaces for early-career researchers to present their work and develop their academic network. Monica has served as a volunteer or member of the organizing committee for seven conferences and congresses, always with the mission of fostering a welcoming and accessible environment for all participants. In all these roles, she has prioritized expanding access for junior researchers and underrepresented communities in mathematics.