

Latinxs and Hispanics in Mathematical Sciences



Vilma Mesa

Vilma Mesa is Associate Professor of Education and Mathematics at the University of Michigan, and Faculty Associate at the Center for the Study of Higher and Post-secondary Education, at the University of Michigan. She has conducted several analyses of instruction and textbooks, and has collaborated in evaluation projects on the impact of innovative mathematics teaching practices for students in STEM fields with the Mathematical Association of America, and with funding from the National Science Foundation. As part of the National Study of Calculus, she was in charge of the two-year college case studies. She is collaborating with various practitioners and researchers in several grants investigating quality of mathematics instruction at community colleges, the uses of open-source textbooks in university settings, and programs supporting students in transitioning to Calculus 2 at minority-serving community colleges. She served as Associate Editor for the Journal for Research in Mathematics Education from 2000-2004 and is currently serving as Associate Editor for Educational Studies in Mathematics. As a Fulbright Scholar, she has visited the Center of Advanced Mathematical Modeling at the University of Chile, in Santiago. She serves on the board of the Mathematics Learning by Inquiry initiative. She was a research associate at “una empresa docente,” a research center in Mathematics Education at the University of Los Andes, in Bogotá, Colombia, where she co-authored university textbooks for pre-calculus for engineering, as well as probability and statistics for social science majors. She has published over 40 articles in mathematics education. Prior to her career in education, Mesa was a system programmer for the ministry of finances in Colombia and the District of Bogotá, and a systems advisor for a large firm in Colombia. She has a B.S. in computer sciences and a B.S. in mathematics from the University of Los Andes in Bogotá, Colombia, and a master’s and a Ph.D. in mathematics education from the University of Georgia.

Vilma Mesa investigates the role that resources play in developing teaching expertise in undergraduate mathematics, specifically at community colleges and in inquiry-based learning classrooms. Her overarching research goal is to understand how textbooks, instructors, and students interact in order to create opportunities for students to learn mathematics in post-secondary education. With that goal in mind, her work is located at the intersection of three fields of scholarly inquiry: undergraduate mathematics education, mathematics education writ large, and higher education. Through her research, she seeks to contribute theoretically grounded, empirically-based observations that provide the foundation for knowledge claims and insights that can guide reform of mathematics instruction in post-secondary institutions, with particular emphasis on the important and understudied area of community college mathematics education. Her work spans three areas of research: instruction, examining mathematics instruction in community colleges and other post-secondary settings; curriculum, primarily through analysis of textbook content and use; and institutional organization, investigating the way in which information is transparently communicated across stakeholders (students, faculty, staff, and administrators) regarding placement, curriculum, instruction, student data, student support services, and institutional ethos.

“To me, Hispanic Heritage Month is an opportunity for all US residents to learn about the role that colonialism has played in the oppression of Latin America. I cherish our language, music, food, literature, festivals, dances, stories, sayings, and fiestas, and I take any opportunity to share them. I dream of a day in which we re-establish our deep connections to our Native American ancestors and rescue their wisdom to guide our future.”

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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