

Awards and Prizes

MAA Award for Inclusivity

William Yslas Vélez

University of Arizona

Those who know Dr. Vélez are well aware of his high-quality service to the MAA and the mathematics profession in general, but even those who have served alongside him may be surprised by the extent of his work. His long-standing passion has opened the doors to mathematics and the sciences for underrepresented groups and attracted students to the mathematics major.

His nomination recounts how he invited all first-year minority students at the University of Arizona who had declared a STEM major to come see him, and he told them they should consider minoring in mathematics. Over thirty of Dr. Velez's colleagues signed a letter explaining "For those students who came to see him, he talked to them one-on-one and at length. He discussed their career and personal goals and instructed them on what one is able to accomplish with a mathematics degree. He even helped them complete needed paperwork to add a mathematics minor, major, or to change majors altogether. By doing this, he not only helped dramatically increase the number of minority students and students of color in the mathematics department at his institution, but more importantly, let these students know that there is someone personally devoted to their success. From that moment on he was there for them throughout (and beyond) their studies at The University of Arizona."

Vélez's mentoring did not stop at the undergraduate level. Many mathematicians within the Latinx/Hispanic mathematics community have been mentored by Vélez along their way to becoming mathematicians. He has helped build a healthy and vibrant mathematical community where all are welcome.

Early in his academic career, Vélez presented papers dealing with minority participation in mathematics and the sciences, evidence of his interest that was to blossom by the late 1980s in the form of grants, publications, and regular participation on national boards and committees. The grant projects related to minority participation that Bill has either directed or co-directed have provided scholarships, funded REU programs, and supported minority recruiting and retention efforts. He has written numerous articles discussing strategies for attracting students to the mathematics major and for increasing minority participation. His tireless efforts have resulted in several advising and mentoring awards, including the 1997 President's Award for Excellence in Science, Mathematics and Engineering Mentoring Program.

Widely recognized as a leader in advancing minority participation in mathematics and the sciences, Dr. Vélez has served as President of the Society for the Advancement of Chicanos and Native Americans in Science and as Governor-at-Large for Minority Interests on the MAA Board of Governors; he presented the James R. C. Leitzel Lecture at MAA MathFest 2005 on "Increasing the number of mathematics majors: lessons learned from working with the minority community."

Vélez's leadership is evident in other roles as well. He served a term as Program Director of the NSF Algebra and Number Theory Program, and he has been an active member of many national advisory boards and committees dealing with mathematics, diversity in the profession, and education. Vélez has organized annual meetings of the Southwestern Section of the Mathematical Association of America, one of which included the Sociedad Matematica de Sonora, and another of which he organized together with a regional AMS meeting.

Bill Vélez's role in service to the profession can be characterized as unselfish, generous, passionate, high quality, and inspiring. His contributions have positively influenced the quality and culture of the American mathematical community.

Response

I am very grateful to my friends for thinking of me for this recognition. I am so pleased that the MAA has created this award to highlight the importance of inclusivity in mathematics. To quote Rochelle Gutierrez, "People need mathematics, but mathematics needs people." I think that the mathematics classroom is the most logical place to highlight the relevance of our subject. Enthusiastic teaching would go a long way in attracting students to the continued study of mathematics.

In the late 1980s, I began to address the underrepresentation of minorities in our calculus classes. My initial goal was to help students succeed in these classes. From there I moved to encouraging students to "take one more math class." From this came an increase in the number of minorities pursuing undergraduate degrees. I had hundreds of conversations with minority students about the importance of taking more mathematics and majoring in mathematics. This experience prepared me for the next step.

In 2003 I was asked to take charge of the undergraduate math major program in the department. In accepting this charge I was told by faculty that about 1% of our undergraduates were math majors. I thought the percentage should be closer to 100%. Though I dedicated 15 years to this effort, I only managed to double the number of mathematics majors. I still think that percentage should be closer to 100%.

Biographical Sketch

William Y. Vélez grew up in the warm embrace of the Mexican community in Tucson, Arizona. His grades as an undergraduate were poor, but his interest in mathematics was huge. As a result of his poor grades, he was rejected by most graduate programs and by a miracle he got into the graduate program at The University of Arizona (UA). He earned all of his degrees from the UA, completing his PhD in number theory under Henry B. Mann in 1975. In 1968-69 he served on active duty in the US Navy aboard two aircraft carriers, USS Yorktown and USS Kearsarge. His Vietnam veteran status allowed him to be supported through the GI Bill during graduate school.

He was a Member of the Technical Staff at Sandia Laboratories in Albuquerque, NM from 1975-77. He accepted a position as an Asst. Professor at the UA in 1977 and retired as Professor in 2018. He spent several summers at the Naval Ocean Systems Center in San Diego working on communications systems for submarines and earned several patents.

In the late 1980's he could no longer ignore the tremendous underrepresentation of the Chicano population in mathematics and he began his efforts to attract minorities to the study of mathematics. It was very satisfying to see so many students pursue mathematical studies simply by the act of having invited them to do so. He has enjoyed all aspects of his mathematical career.