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Lathisms: Latinxs and Hispanics in the Mathematical Sciences xv

Dr. James A. Mendoza Álvarez 1



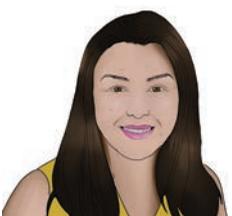
Dr. James A. Mendoza Álvarez's *testimonio* begins with the story of his mother, Olga Mendoza, whose life takes us through a time in the twentieth century when signs stating “Mexicans not allowed” were commonplace in Texas. Olga's struggles, wisdom, and influence, not only illustrate the plight of people of Mexican descent, but have also been a major driving force in Dr. Álvarez's life and in his professional trajectory. After his *testimonio*, Dr. Álvarez gives advice for those of us within academia whose work aims to address the underrepresentation of Latinxs and Hispanics in the mathematical sciences.

Dr. Federico Ardila Mantilla 15



Dr. Federico Ardila Mantilla's *testimonio* begins with the story of his family to show us where he comes from. He guides us through his mathematical journey, beginning with learning to love math as a result of participating in the math olympiads, then learning the power of working in collaboration and community, and finding his mathematical home at SFSU. Dr. Ardila Mantilla shares some of his difficult experiences, teaches us about life balance, and encourages us to not close doors on ourselves, and instead open them and leave them open for those who come after us.

Dr. Selenne Bañuelos 31



Dr. Selenne Bañuelos' *testimonio* is about family, community, culture, and their importance in cultivating talent. As a child of immigrants, she learned from her parents the value of hard work and the power of education. She always believed she could, not in spite of being a Chicana woman, but because of it. Her story is one of overcoming adversity with the strength of discipline, hard work, and a very clear goal.

**Dr. Erika Tatiana Camacho****41**

Dr. Erika Tatiana Camacho's *testimonio* is centered around the importance of paying it forward, mentorship, and changing the world through mathematics. Dr. Camacho tells us how her mentor-mentee relationship with Jaime Escalante changed her life, highlighting the importance of such relationships. She shares some of her experiences with overt discrimination. Dr. Camacho then tells us about her amazing work developing mechanistic models to aid in understanding causes of blindness, and shares with us her experiences in driving the Latinx community forward

through her efforts.

**Dr. Anastasia Chavez****51**

Dr. Anastasia Chavez' *testimonio* brings us a story of perseverance in the face of discrimination. She tells us about how support is an essential need to overcome systemic barriers that exist in academia. Her story is an inspiring one—riddled with difficulties from raising a family in the middle of graduate school and a lack of support from gatekeepers—but ending with becoming an outstanding researcher in algebraic combinatorics who does not forget to help and inspire those who need it.

**Dr. Minerva Cordero****59**

Dr. Minerva Cordero's *testimonio* walks us through her early passion for mathematics, her family life, and the mentors who inspired her to pursue a career in mathematics. Her resilience through family tragedy became her motivation to continue to pursue her passion for mathematics. Dr. Cordero believes in the value of both mathematics and diversity in advancing society. Through her teaching, mentorship, and research, she wants to encourage the interest of underrepresented minorities and women

in Science, Technology, Engineering, and Mathematics (STEM).

**Dr. Ricardo Cortez****71**

Dr. Ricardo Cortez's *testimonio* is a story about family, perseverance through hardship, and giving back to the community through service. After being raised in El Salvador, he pursued bachelor's degrees in engineering and mathematics in the United States. It was through the advice of mentors and peers that he decided to pursue a PhD. During his career, Dr. Cortez has been involved in many efforts to address the issues faced by underrepresented students in mathematics. Lastly, he emphasizes the importance of maintaining your own professional advancement

to ensure that these efforts are effective.

**Dr. Jesús A. De Loera Herrera****81**

Dr. Jesús A. De Loera Herrera's *testimonio* is marked by a love for learning. Born and raised in Mexico City, he spent his early education years being fascinated by mathematics. Dr. De Loera Herrera tackles problems in combinatorial optimization while studying his favorite mathematical objects, polyhedra. He shares how his journey would have been impossible without the great support he has received from his family and mentors. Dr. De Loera Herrera pays it forward by making mathematics accessible to all, mentoring students, and fighting for equity and inclusion in Science, Technology, Engineering, and Mathematics (STEM).

**Dr. Jessica M. Deshler****91**

Dr. Jessica M. Deshler's *testimonio* is one of patience, balance, and persistence. Growing up with a supportive family and a supportive teacher, she developed mathematical curiosity that led her to pursue mathematics. Her passion for mathematics and mathematics education and its exploration arose early on, but was challenged and questioned by others when she prioritized starting a family while in graduate school. Dr. Deshler's *testimonio* demonstrates that success is personally defined and one determines the pace at which one achieves one's goals.

**Dr. Carrie Diaz Eaton****99**

Dr. Carrie Diaz Eaton's *testimonio* brings us a story of intersectionality of identities. She tells us about how her various identities have influenced her throughout her life to create *networks of change*. The balancing of these identities is reflected in her research in mathematical biology and interdisciplinary education. After her *testimonio*, Dr. Diaz Eaton reminds us all of the importance of staying true to one's self and highlights the promising future that the new generation of mathematical biologists brings. Through her leadership and involvement in various professional organizations, she hopes to foster collaborations that address equity and social justice.

**Dr. Alexander Díaz-López****109**

Dr. Alexander Díaz-López's *testimonio* takes us from sacrifices made by his family to provide opportunities for him to thrive, through struggles he overcame in early graduate school, to his efforts in creating spaces where all can thrive. He tells us what it feels like to be the only one in the room and how mentors can push us to be our very best.

**Dr. Stephan Ramon Garcia****117**

As a child of Cuban and Japanese immigrants, Dr. Stephan Garcia's *testimonio* resonates with anyone searching for a sense of belonging. He grew up with one side of his family fleeing war while the other side was running away from an oppressive government. His mathematical talents were evident from a very young age, but, like many, he lacked good mentorship and focus. Despite this, and thanks to what he attributes to good luck, Dr.

Garcia is now an incredibly accomplished mathematician.

**Dr. Ralph R. Gomez****127**

Dr. Ralph R. Gomez's *testimonio* takes us on his journey to becoming a mathematician through a path that many would consider to be non-traditional. Dr. Gomez embraced education as a way to avoid following in the footsteps of his older brother and along the way he discovered a passion for mathematics. Through family deaths and facing impostor syndrome, Dr. Gomez's *testimonio* exemplifies how the power of words, no matter how short the phrases shared, can have an impact in motivating someone to achieve their goals.

**Dr. Victor H. Moll****135**

In his *testimonio*, Dr. Victor H. Moll shares how after the early death of his father, mathematics became his refuge. Taking us from his early education to the 1973 Chilean coup d'état, he shares how his years as an undergraduate meant he learned mathematics living through a military regime with imposed curfews. This period of transition in Chile, meant few PhD mathematicians lived in the country, but luckily Dr. Moll found a

mentor who encouraged him to attend graduate school in the U.S., helping shape the rest of his career.

**Dr. Ryan R. Moruzzi, Jr.****145**

Dr. Ryan R. Moruzzi Jr.'s *testimonio* interweaves advocacy and resiliency. His story shows how mentorship and family can support one's academic journey. The journey of his mother, Irene, has influenced the decisions and approaches taken towards him completing his goals. Dr. Moruzzi's *testimonio* affirms that insecurities are present in the pursuit of your aspirations, but success can be reached when you self-advocate and have others who support and build your confidence.

**Dr. Cynthia Oropesa Anhalt****155**

Dr. Cynthia Oropesa Anhalt's *testimonio* is marked by a passion for learning, the great number of teachers that inspired her, and her continuous work to broaden teachers' knowledge. Her contributions to the field of mathematics education are interdisciplinary and extend to social issues in K–16, teaching mathematics in a K–16 and hospital setting, and using mathematical modeling for teaching. Finally, Dr. Anhalt emphasizes that, while her journey has been non-traditional, she is grateful to have pursued her career and built life-long collaborations that move mathematics

research forward.

**Dr. Omayra Ortega****165**

For Dr. Omayra Ortega, life is lived between the oceans. The daughter of Panamanian immigrants, she grew up by the sea in Long Island. Her conservative family taught her about work ethics and the importance of family, but as soon as she had the chance, and thanks to her academic talents, she left her home to find herself outside the nest. Her *testimonio* reveals the story of

a young talented woman who, as many first-generation students, struggled to understand the rigors of college. After a few unexpected turns, she mastered the art of learning and later spending a few years in the Midwest for her graduate studies, Omayra returned to her beloved ocean and now lives in Northern California.

**Dr. José A. Perea****175**

Dr. José A. Perea's *testimonio* takes us from Santiago de Cali, Colombia to Palo Alto, California, and finally to East Lansing, Michigan. Throughout Dr. Perea's story, we see the importance of acts of kindness and mentorship, and how mentors stepping up when opportunities were lacking complemented Dr. Perea's outstanding mathematical abilities to create a mathematician who now pays it forward.

**Dr. Angel Ramón Pineda Fortín****183**

Dr. Angel Ramón Pineda Fortín's *testimonio* shows us how his family's value for education motivated its members to achieve their educational ambitions. His journey begins with his grandmothers supporting their children to pursue an education, which led to Dr. Pineda's parents becoming medical doctors. He recounts his path to becoming a mathematician in the United States as an immigrant and someone with the fortune to have been surrounded by family who have always supported his educational endeavors. With a passion for helping others, Dr.

Pineda's story is one of balance and using mathematics as a tool to help others.

**Dr. Hortensia Soto****191**

Dr. Hortensia Soto's *testimonio* is shaped by hard work. Rising before sunrise as a child through her youth to help her family farm, she developed a strong work ethic, which has served her well in every aspect of her life. This, together with her resilient spirit, helped convince her mother to allow her to leave home and attend college. Throughout her story, Dr. Soto highlights those on her "gratitude list" which is comprised of key individuals who have helped her and her family. Her gratitude list reminds us of the value of community. After her *testimonio*, Dr. Soto gives brief

advice to both students and mentors.

**Dr. Roberto Soto****203**

Dr. Roberto Soto's *testimonio* takes us through an "unexpected journey" through the world of numbers that almost did not happen. How such travels and experiences in experimental mathematics collide with mentors throughout life is a truly incredible story of how diverse all of our paths are on the way to becoming professional mathematicians.

**Dr. Richard A. Tapia****213**

Dr. Richard A. Tapia's *testimonio* is a unique story of resilience and achievement. Dr. Tapia rose from humble beginnings to attain the greatest heights of an academic life, or—as he puts it—to run with the big dogs. Dr. Tapia touches on significant tragedies in his life story and reminds us throughout how critical it is to have a strong support system of family and friends. He shares his work mentoring underrepresented minority students and his views regarding the importance of enlarging the pool of mentors with similar backgrounds. He reminds us that improving the future of underrepresented minorities begins by considering

them not as a unidimensional group, but rather as a multifaceted set of talented individuals. Dr. Tapia touches on his many outreach efforts, including grant-funded efforts and the co-founding of SACNAS. His *testimonio* takes us from Los Angeles to The White House, where he received the National Medal of Science from President Barack Obama.

**Dr. Tatiana Toro****225**

In Dr. Tatiana Toro's *testimonio* we learn of the challenges faced by her family given the difficult political climate in Colombia in the 1950s. She shares her experiences while pursuing a mathematics career during a time when her moving to study in France, and later to the United States, was thought to lead a young woman to "the road to perdition." Her perseverance and determination helped her push through to complete her studies and become an award-winning mathematician. Among her numerous contributions, she shares with us her work in the organization of the Latinxs in the Mathematical Sciences Conference, the first of its kind in the United States.

**Dr. Anthony Várilly-Alvarado****235**

Dr. Anthony Várilly-Alvarado's *testimonio*, walks us through his family history from Brazil to Costa Rica, where his own story began. Growing up he had a passion for the abstract and it translated into pursuing mathematics as his career. His research interests lie in the area of arithmetic geometry, where he studies diophantine equations and currently applies his expertise in collaboration with earth scientists.

**Dr. Mariel Vázquez Melken****249**

Dr. Mariel Vázquez Melken's *testimonio* is a story of love for her city, her roots, and for mathematics. Dr. Melken details growing up in the largest city in the world, immersed in its incredibly rich culture and the struggle of its overpopulation. As a teenager she fell in love with mathematics and microbiology. She chose math thinking that she had to choose one of the two. Fortunately in college she realized she could study both. She is now one of the leading mathematical biologists in the world. Her *testimonio* also talks about being a woman in a male-dominated field and, more importantly, how she has learned to survive and fight for others.

**Dr. William Yslas Vélez****259**

Dr. William "Bill" Vélez's *testimonio* is a story centered around resilience, family, and his partnership with his wife Bernice. Despite growing up in poverty, Dr. Vélez shows us how the support of his family was an important component for his success. He shares the role of Mexican-American culture in his journey and how his mother was a key figure in his education. He also discusses his experience as the first Chicano hired in a tenure-track position at the mathematics department at the University of Arizona, and how he found his voice in the mathematical community. Dr. Vélez continues his efforts to support his students and increase minority representation in

mathematics through active participation in professional organizations such as SACNAS and the Math Alliance.

### Dr. María Cristina Villalobos

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Dr. María Cristina Villalobos' *testimonio* frames her story through an important life lesson of taking the initiative; a lesson she now passes on to her students. She recounts the ways in which “taking the initiative” helped her find mentors, pursue new opportunities, and how it led to becoming a driving force in broadening the STEM participation of women and minorities. Being the recipient of a 2019 Presidential Award for Excellence in Science, Mathematics, and Engineering Mentoring, a top honor awarded by the White House, Dr. María Cristina Villalobos is proof that it takes initiative to reach our goals.

### About the Editors

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