

Henry L. Alder Awards

Andrea Arauza Rivera

California State University, East Bay

Dr. Andrea Arauza Rivera is an extraordinary teacher, collaborator, mentor, and leader.

She was born in Guadalajara, Mexico and her family moved between Texas, Mexico, and Nevada before settling in the California Central Valley. At CSU Stanislaus she earned her B.S. in Mathematics. In 2018, she completed a PhD in Mathematics at UC Riverside and then joined California State University, East Bay as an Assistant Professor in Fall, 2018.

At CSU East Bay, Dr. Arauza Rivera combats systemic and structural inequities through active, inclusive, and engaging instruction. Her values of joy, community, justice, and love can be seen elegantly woven throughout her contributions in three key areas: curriculum and instruction, equity through innovative assessment, and student research and projects.

Dr. Arauza Rivera sets the stage for all her courses with materials that are beautiful, unique, thought provoking and inspiring. She uses language and imagery to bring important concepts to life, allowing students to see mathematics through a new lens. Through the exploration of puzzles vs. problems and engagement vs. participation, she creates a space in which students are able to see themselves as thinkers about and creators of mathematical ideas. Dr. Arauza Rivera has contributed to the creation of a robust set of instructional materials for precalculus and was co-leader on a grant-funded intersegmental faculty team in implementing the materials across institutions. Dr. Arauza Rivera has created two new upper division courses while at CSU East Bay. Both courses not only introduce students to new content but were designed to engage students in independent projects that broaden their view of “doing” mathematics.

In her first three years at Cal State East Bay, Dr. Arauza Rivera has led 9 undergraduate research projects with 15 students. For example, she engaged freshmen and sophomore STEM majors to work on projects relating mathematics and the social/cultural/political systems in the Bay Area. She mentored undergraduate and graduate mathematics students in research on problems in fractal geometry. Her students are eloquent about the value of these experiences. More broadly, she has reinvigorated the colloquium series and brought the 2019 Pacific Math Alliance conference to CSUEB.

Dr. Arauza Rivera’s commitment to infusing her values of joy, community, justice, and love in all that she does has changed student lives and opened

doors. Her generosity in creating and sharing her materials has impacted other instructors at CSUEB and beyond. She thinks deeply about her work and holds the community in her heart as she lifts up her students to be their best selves. She is well deserving of the honor of the 2023 Henry L. Alder Award.

Response

For me, being a math professor is an opportunity to serve and empower communities that have been actively excluded from the power and joy that stems from mathematics. Every day, I try to show up for my students, to honor the trust they have in me. This award is as much about the power of community as it is about my achievements as an educator. I'd like to thank my family for teaching me respect, responsibility and excellence. I'm grateful to Julie Glass, Edwin Lin, Maria Palomino, Yvette Morales, Sandra Torres, and Julia Olkin who wrote to nominate me for this award. The best part of it all was reading your words. Finally, I'd like to thank my ancestors for keeping me centered and gifting me with their wisdom.

Biographical Sketch

Dr. Andrea Arauza Rivera is a proud queer Chicana mathematician, born in Guadalajara, Mexico and raised in the US. Andrea began her academic journey at Modesto Junior College before transferring to CSU Stanislaus and then pursuing a PhD. She earned a PhD in mathematics from the University of California, Riverside in 2018. Her research is in the areas of functional analysis and fractal geometry. Andrea is now an assistant professor at Cal State East Bay where she shares the joy and power of mathematics with her students and reminds them “¡Sí se puede”!