



Mathematics Programs that Make a Difference Award

In 2005, the American Mathematical Society, acting upon the recommendation of its Committee on the Profession, established the Mathematics Programs that Make a Difference Award in order to highlight programs that are succeeding and could serve as a model for others. This award recognizes outstanding programs that have successfully addressed the issues of underrepresented groups in mathematics.

Citation

California State University at Fullerton

The Department of Mathematics at California State University at Fullerton (CSUF) will receive the 2022 AMS Mathematics Programs that Make a Difference Award. The department is recognized for its excellent record of mentoring and graduating students from underrepresented groups.

Response from California State University at Fullerton

At the heart of Cal State Fullerton's Mission and Goals lies a central idea that we aspire to combine the best qualities of teaching and research universities, where actively engaged students, faculty, and staff work in close collaboration to expand knowledge. Subsequently, a central theme in CSUF's philosophy is to enhance scholarly and creative activity. This underlying premise is carefully materialized by a community of mathematicians serving their profession and their scholarly community. As such, the Department of Mathematics has directed significant efforts to developing a student-faculty research culture, and thus accelerating the path towards preparing cohorts of new scholars.

This is "a program that has undeniably shaped my aspirations and continually pushed me to grow as a scientist," said Isabel Serrano, presently a PhD candidate in computational biology at the University of California, Berkeley. "As an alum, I can attest to the vital impact this department has had in diversifying the mathematical and scientific communities."

Claudia Gutierrez, a CSUF alum now teaching mathematics at Moorpark College, wrote: "In addition to the impact that my teachers made in my math journey, the



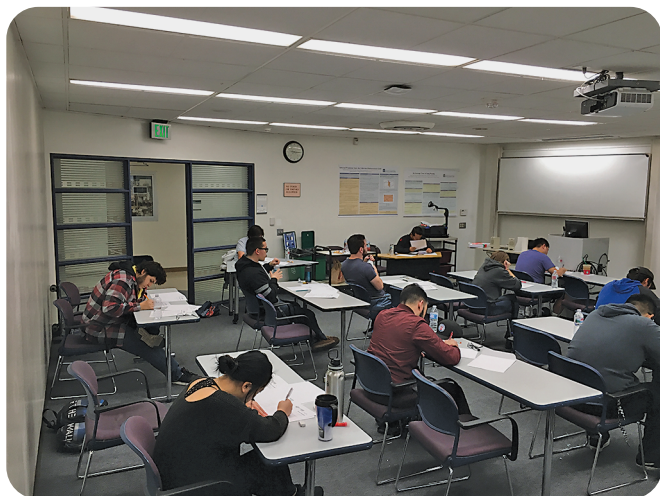
CSUF students gather after presenting their research at the MAA Student Poster Session at the 2018 Joint Mathematics Meetings in San Diego. *Left to right:* Cameron Hooper, Freddy Nungaray, Roberto Hernandez, Isabel Serrano, Jasmine Camero, Oscar Rocha Rocha, Alexandro Luna, and Daniel Zelaya.

CSU Fullerton math program also had programs and student clubs such as SMART Girls Club, Math Club, Math Tutoring Center, and Supplemental Instruction, which all went above and beyond to support me as a student of mathematics, as a teacher of mathematics, and as a woman in mathematics. The CSU Fullerton math program truly makes a difference, and I am honored to be an example of such difference."

Describing the campus's academic culture, Dean of Natural Sciences and Mathematics Marie Johnson noted, "We meet our students where they are and take them where they want to go. We specifically pay attention to students who have never thought of themselves as capable of getting

involved with higher-level mathematics. That turns into an amazing journey in a very diverse academic setting, serving the needs of a vibrant community of learners.”

Between 2008 and 2020, out of 628 students who completed a degree from the CSUF programs in pure mathematics, applied mathematics, probability and statistics, and teaching mathematics, 198 were underrepresented minorities, 300 (48%) were women, and 327 (52%) were eligible to receive Pell Grants. In the same span of time, 340 first-generation students entered the CSUF program in mathematics, 192 (31%) of whom were Hispanic. In the last decade a large array of papers co-authored by students and faculty in the CSUF program appeared in journals such as *Proceedings of the AMS*, *Taiwanese Journal of Mathematics*, *Houston Journal of Mathematics*, *Notices of the AMS*, and *Japanese Journal of Mathematics*.



CSUF students participate in the William Lowell Putnam Mathematical Competition in December 2017.

Another CSUF alum, Lindsay Lewis, who now teaches mathematics at Golden West College, wrote, “It is an understatement to say that the opportunities at CSUF changed my life. Without the talented faculty and variety of programs accessible in the CSUF Mathematics Department, I truly do not know where I would be today. I am able to inspire other females and previously uninterested students to explore the STEM fields, and I contribute to my community daily. Serving as teacher, a role model, and a mentor is one of the most important aspects of my life, and I am grateful to the CSUF Mathematics Department for its extensive role in my development.”

One of the important components of the Department of Mathematics’s efforts is the Center for Computational and Applied Mathematics (CCAM), which serves to encourage and facilitate research, education, and outreach in computational mathematics and science through interdisciplinary collaborations of a diverse group of faculty, students, and external partners. Laura Smith Chowdhury, associate

professor of mathematics and associate director of CCAM, wrote, “Our department’s focus on students is evident in the plethora of opportunities available for students, including research opportunities with faculty, industrial consulting projects, teaching apprenticeships, problem-solving seminars, international research experiences abroad, and more. To be honored with this recognition is a testament to the faculty and students that have invested in these many efforts.”

CSUF mathematics educator Armando M. Martinez-Cruz, a recipient of the Outstanding Latino/a Faculty in Higher Education Award from the American Association of Hispanics in Higher Education, describes the Cal State Fullerton spirit in the following terms: “We love mathematics, students, and teaching mathematics. We aim to infuse this love and passion in our teaching graduates since teachers will touch every future professional: scientists, engineers, lawyers, governors, presidents. At Cal State Fullerton, we provide a comprehensive pathway to teaching mathematics. Our undergraduate and graduate teaching programs are nurturing programs that model best practices of teaching mathematics, a passion for mathematics, and the belief that all students can learn mathematics.”

Credits

Photos are courtesy of Bogdan Suceavă.