UC Irvine Wins 2025 AMS Award for an Exemplary Program in a Mathematics Department

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The Math Community Educational Outreach (Math CEO) program at the University of California, Irvine (UCI) will receive the 2025 AMS Award for an Exemplary Program or Achievement in a Mathematics Department.

Founded in 2014, UCI’s Math CEO is an after-school math enrichment program aimed at increasing the number of talented students in STEM from diverse backgrounds by fostering mathematical exploration, mentor development, and community engagement.

The University of California, Irvine (UCI) Math CEO program is recognized for its exceptional contributions to the mathematics community and society at large. Established in 2014 by professors Alessandra Pantano and Li-Sheng Tseng, Math CEO targets students from Title I middle schools, providing them with a high-quality after-school math enrichment program. This program brings middle-school students to the UCI campus to work in small groups with undergraduate mentors, many of whom are also from historically marginalized groups, to engage in challenging mathematical tasks and encourage exploration.

From September 2019 to June 2024, Math CEO engaged a total of 1,221 youth, with 48.6% identifying as female. The ethnic background of the participants was predominantly Latinx (93.5%), with smaller representations of Asian, white, and multiethnic students. In the same five-year period, Math CEO engaged 553 undergraduate mentors, 62.2% of whom were female. The mentors’ ethnic backgrounds were diverse, with significant representation of Asian (52%) and Latinx (30%) students. The undergraduate mentors, many of whom pursue careers in education, receive training in culturally responsive teaching practices and equity in education, significantly impacting their professional development. In a post-survey, 52.3% of the undergraduate mentors expressed interest in teaching or working in education and 45.9% were likely to pursue professions working with children or families.

Recognizing the central role of families in supporting Latinx youth, Math CEO involves parents through bilingual workshops that enhance community awareness of college pathways and financial opportunities.

Math CEO has been the foundation for numerous research projects in mathematics education, supported by NSF grants, leading to publications and program growth. The program’s success is evident in its expansion to high schools and other regions in Southern California, including a new branch at California State University, Dominguez Hills. Math CEO continues to make a substantial impact on underserved youth, demonstrating a model of systemic, reproducible change that can be implemented by others.

Response of Alessandra Pantano, UCI Math CEO

I am deeply honored to receive the AMS Award for an Exemplary Program in a Mathematics Department on behalf of the UCI Math CEO team. This wonderful award recognizes the work of many colleagues, graduate students, and undergraduate students in developing and delivering the UCI Math Community Educational Outreach (Math CEO) program. For over a decade, Math CEO has provided creative and culturally responsive math enrichment opportunities for hundreds of underprivileged middle-school students, many of which have since "graduated" to high school or even college. Leading this exceptional and dedicated team of volunteers has been the highest pride of my professional life. A special thanks to my partners-in-crime, Prof. Li-Sheng Tseng, codirector of Math CEO, and former graduate student Andres Forero Cuervo, academic coordinator for Math CEO: We could have never done this without you. I look forward to pushing this activity forward and continuing to dedicate my energy to help kids in our county find the way to express their potential – in math and in life! A big thanks to the colleagues who nominated us and to the AMS for recognizing our efforts.

History of the program

The UC Irvine Math Community Educational Outreach (Math CEO) program was founded in 2014 by math faculty Alessandra Pantano and Li-Sheng Tseng in collaboration with Santa Ana Unified math teacher Jasmina Matasovic. The founders shared a belief that low standardized test scores in underserved communities do not reflect students' interest and potential to succeed in STEM. Math CEO runs free, weekly, after-school math enrichment sessions, welcoming all youth regardless of math achievement. Starting with only 25 students from one middle school, the program has grown and engaged nearly two thousand students in all, from multiple school districts in Southern California.

About the award

The annual AMS Award for an Exemplary Program or Achievement in a Mathematics Department was established in 2004 and first given in 2006. This award recognizes a department which has distinguished itself by undertaking an unusual or particularly effective program of value to the mathematics community, internally or in relation to the rest of society. Departments of mathematical sciences in North America that offer at least a bachelor's degree in mathematical sciences are eligible. The award amount is currently $5,000. The award will be presented at the 2025 Joint Mathematics Meetings in Seattle.

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