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Computer Scientists Receive \$2M NSF Grant to Expand Early Research Program for Underrepresented Groups

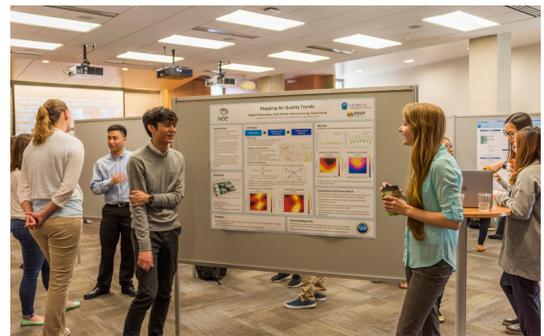
Funding will support computer science research apprenticeships at seven partner universities, impacting hundreds of students

A program at the University of California San Diego designed to increase retention of underrepresented groups studying computer science will get a roughly \$2 million boost from the National Science Foundation over the next five years.

The funds will support expansion of the [Early Research Scholars Program](#) (ERSP) at UC San Diego Jacobs School of Engineering to at least seven universities, beginning with UC Santa Barbara, Stanford University and University of Illinois at Chicago in the next two years. The grant will also allow researchers to study the long-term outcomes for students who participate in the program.

“The impact this grant will have on computer science students, particularly those from underrepresented groups, can’t be overstated,” said Christine Alvarado, founder of the ERSP and a teaching professor with the Department of Computer Science and Engineering at UC San Diego. “Early research can build students' confidence and help them develop their identities as computer scientists. And for some students, research becomes a lifelong passion.”

Since its inception in 2014, ERSP has provided research opportunities for 138 students, including 96 female or non-binary students and 26 students from underrepresented racial and ethnic groups. On average, students who participate in ERSP have higher overall grade point averages than those who do not.



UC San Diego students participating in the Early Research Scholars Program share the results of their apprenticeships with peers, faculty and staff.

“At UC Santa Barbara, many women and traditionally underrepresented students excel in their first-year courses and want to go deeper in the field, yet they are vastly underrepresented in computer science research. ERSP will go a long way in bridging this gap,” said Diba Mirza, one of the program’s co-investigators and an assistant teaching professor with the Computer Science Department at UC Santa Barbara. “The launch of the program on our campus has received an overwhelmingly positive response from students and the department is eager to support undergraduate research.”

ERSP uses a team-based approach to make computer science research less intimidating. Second-year student teams complete a full year apprenticeship, in which they take an introductory computer science research course; observe a research group’s activities; and then propose and complete an independent project with guidance from a team of mentors.

Past projects range from using machine learning techniques to identify the perfect workout to underwater systems that estimate ocean depth. Individual institutions and departments can tailor this original model so it has the greatest impact on their students.

“Our end goal is to create a flexible and easy-to-implement program that can be initiated by any university with a significant research program. The rewards include not just retaining diverse students, but also increasing the number of undergraduate students who are trained in research methods,” Alvarado explained.

For more information on the Early Research Scholars Program, visit: <http://ersp.ucsd.edu/>.

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