

\$18.5 Million Alumni Gift Lifts UC San Diego's Computer Science & Engineering into New Era



Photos by Erik Jepsen/UC San Diego Publications

An \$18.5 million gift from a UC San Diego alumna will set the computer science and engineering department on a new course into the future, funding new faculty endowed chairs, top-of-the-line teaching labs, support for graduate students, and expanded mentoring and tutoring programs for the next generation of undergraduates.

The gift marks a milestone in UC San Diego's history as it is the largest gift ever made to the university by one of its alumni.

"This is a game-changing gift for UC San Diego – both in terms of alumni support and in terms of the tremendous impact it will have on our computer science and

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engineering department,” said UC San Diego Chancellor Pradeep K. Khosla. “Now that UC San Diego is over 50 years old, we are entering an era in which alumni are coming forward in unprecedented ways to strengthen this institution.”

This gift will enable the computer science and engineering department at the Jacobs School of Engineering to reach new levels of excellence in all areas, with a particular focus on students.

Undergraduate students, for example, will benefit from a greatly expanded computer science and engineering tutor program. Tutors are stationed in computer science and engineering labs, where they provide one-on-one and small-group mentoring. Students in introductory classes get help at crucial moments; tutors develop marketable leadership and teaching skills; and the entire department benefits from a stronger sense of community.

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The computer science and engineering department also will have the resources to create and teach new project-based undergraduate classes, along the lines of the popular “Software System Design and Implementation” class. In this class, student teams create 3D video games from scratch in 10 weeks.

“This gift comes at a critical juncture as we position the department for success in its research and education mission,” said Rajesh Gupta, professor and chair of the department of computer science and engineering. “The gift will enable us to significantly enhance computer science education by putting our undergraduate students front and center in all our activities.”

Today, computer scientists play crucial roles in nearly every industry. They work as software and systems engineers; application developers; network gurus; database designers; experts in data centers, cloud computing, systems security and much more. Computer scientists are interfacing with an increasing number of mission-critical systems and are addressing society’s pressing problems—ranging from energy and environmental sustainability, to security, democracy and healthcare. At the same time, cutting-edge computer science and engineering research continues to drive advances in knowledge across these wide-ranging domains and beyond.

Computer Science Changing, Surging Ahead

This gift comes at a time of tremendous growth in undergraduate enrollments in computer science and engineering at UC San Diego. With a projected 1,800 undergraduate students in fall 2013, it is the largest computer science and engineering department in the nation, according to the American Society for Engineering Education.

The donor of the historic gift is a graduate of the computer science and engineering department at the Jacobs School of Engineering. He said he wishes to remain anonymous.

“This gift is not about me. It is about the computer science and engineering department—and most importantly, the students,” he said. “I made this gift to recognize the wonderful education I received and to assist the department in its efforts to reach even higher levels of

The Gift in Action

The \$18.5 million gift provides the following:

- Provides just over half of the estimated \$5.5 million needed to expand and remodel the computer science and engineering building in order to increase undergraduate computer science labs by 7,000 square feet and better integrate them with the rest of the building. The remodel will include creation of the Design Innovation Center, which will provide space and equipment for student-researcher interaction and for team projects ranging from embedded computing and robotics, to visualization, graphics and human-computer interaction.
- Establishes five new endowed chairs that will enable UC San Diego to attract the highest caliber computer science and engineering professors in growth areas such as big data, computer systems and cyber-physical systems.
- Allows the computer science and engineering department to hire more tutors, technical support staff and teaching assistants to interact with undergraduates. The ultimate goal is to provide one tutor for every six undergraduate students in key introductory classes.
- Provides funds to create new advanced undergraduate courses that follow introductory courses in many areas, including networking, distributed computing and embedded and mobile computing systems.
- Funds fellowships and other crucial support for graduate students.

excellence. It is my wish to ‘pay it forward,’ and I hope other alumni, at all giving levels, will consider doing the same.”

The \$18.5 million gift will provide critically needed funding to remodel the computer science and engineering building and increase undergraduate computer science labs by 7,000 square feet and better integrate them with the rest of the building. It also will establish five new

endowed chairs that will enable UC San Diego to attract the highest caliber of computer science and engineering professors in growth areas such as big data, computer systems and cyber-physical systems.

“As one of the top research engineering schools in the nation, it is the Jacobs School’s mission and obligation to prepare our students to solve difficult problems and become technology leaders,” said Juan C. Lasheras, interim dean of the Jacobs School of Engineering. “Students are motivated and inspired to learn when they understand how theory applies to meaningful, real-world problems. This gift will be transformational for our computer science and engineering education program through additional resources and facilities to support our students and engage more of them in one-on-one and team-design experiences. The five new endowed chairs will strengthen our faculty and provide more resources for faculty projects that include students.”

Computer science has changed since the early days, and computers now do much more than mathematical computations. Computer science education needs to change as well, explained Gupta. By the time computer science and engineering undergrads graduate, they need to know more than programming. They need, for example, hands-on experiences working on software and hardware platforms as well as the ability to prototype, experiment and create.

- Allows for more labs and more equipment such as new hardware and software to model computer architecture; new equipment for printed circuit board design and assembly; new devices to interface with computers; 3D printers – and technical staff to run these labs and mentor students.



“This gift will allow us to provide our students with opportunities that reflect the much broader role that computer science and engineering now plays in business and in our everyday lives,” Gupta said.

Inspiring Imaginations

This gift puts the computer science and engineering department more than half of the way to the \$25 million goal for its “[Inspiring Imaginations](#)” initiative.

Driven in large part by explosive growth in computer science and engineering undergraduate enrollment in recent years, the “Inspiring Imaginations” initiative is focused on raising endowment funds to improve undergraduate computer science and engineering education by creating new hands-on design labs and providing greater resources for new courses and for tutoring and mentoring of students.

“Increasing the endowment for specific departments and programs, and for UC San Diego as a whole, is of critical importance,” said Chancellor Khosla. “For UC San Diego to maintain and strengthen its position as a world-class university with excellent undergraduate education, graduate education and research, we must increase our endowment. I sincerely hope that this gift inspires other alumni to give back and to help shape UC San Diego’s bright future – which we are now charting through our campus-wide strategic planning process.”

[Learn more about supporting the Jacobs School of Engineering.](#)

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