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Engineering Excellence

More than 360 UC Santa Barbara undergraduate students have completed the requirements to earn bachelor's degrees in chemical engineering, computer engineering, computer science, electrical engineering or mechanical engineering during the 2018-19 academic year. They'll all convene Saturday, June 15, for the College of Engineering's 2019 graduation ceremony, where a handful will receive special commendations for outstanding academic performance and service to the university.

Outstanding Seniors

Each year, the college recognizes the graduating senior with the highest cumulative grade point average from each degree program. This year's Outstanding Seniors are Dorian Bruch (chemical engineering), Hyun-Bum Cho (computer science), Kyle Douglas (electrical engineering), Sayali Kakade (computer engineering) and Thomas Fork (mechanical engineering).

Accordingly, Bruch, Douglas and Fork will serve as student marshals, carrying the banners and leading the academic procession into the ceremony. All three students earned 4.0 GPAs, the first three-way tie for the honor in College of Engineering history.

"Being recognized as an outstanding senior and carrying the banner makes me extremely proud to represent the wonderful chemical engineering program we have at UCSB," said Bruch, who will start graduate school at California Institute of

Technology in the fall. “While at UCSB, I discovered my passion for thermodynamics, statistical mechanics, and theoretical and computational soft matter physics. I also found mentors who will continue to positively impact my academic development and career path.”

Fork belongs to a team of engineering students working on FitNet, a Capstone project focused on developing an in-home therapy system for infants born with cerebral palsy. Capstone pairs students with industry or academic experts to create an engineered solution for real-world problems. It’s one of seven projects Fork is juggling this spring quarter.

“I did not feel like an actual engineer until working on real-life problems, where the problems were inherently multifaceted,” said Fork, who plans to work a few years in industry before applying for graduate school. “I believe my willingness to go beyond my major and courses fit much better with, and was complemented by, the work I did outside of the classroom.”

Douglas and Kakade are participants in the Capstone project Eternal Flight, which addresses the short-term battery life in unmanned aerial vehicles or drones. Douglas, a native of San Diego, will continue on at UC Santa Barbara as a graduate student focusing on control theory. Following graduation, Kakade, who completed two summer internships with Google, will begin working for the company as a software engineer.

With a 3.98 cumulative GPA, Cho earned his computer science degree in just three years, once taking six classes in a single quarter. Cho, who interned at startups and worked as a research assistant while taking classes, said he has come a long way since high school. He described himself as a bottom-tier student, who often slept through class his first two years of high school.

“My junior year of high school, a lot happened to shift my mindset. I took an AP computer science class and my life took a drastic turn,” said Cho, who will start his new career as a software engineer at Facebook after graduation. “With computer science, I found something more interesting than gaming. I viewed college as a way for me to redeem my past mistakes. This award serves as validation and motivation to continue working hard and improving.”

Hynes-Wood Award

Computer science major Margaret Schmit is the recipient of the 2019 Hynes-Wood Award, which recognizes students for outstanding contributions to student activities and helping others with professional growth and development. The award is named for Jacqueline Hynes, former assistant dean for academic programs in engineering, and Roger Wood, a beloved electrical and computer engineering professor and former associate dean for academic affairs.

While at UC Santa Barbara, Schmit served as an officer in the Society of Women Engineers for four years, and was an active member of the engineering sorority, Phi Sigma Rho. She arranged outreach events at nearby elementary schools to promote science and organized the Evening with Industry event, which united engineering students and industry representatives to network. A six-time member of the Dean's Honors list, Schmit has accepted a position as a program manager for Microsoft in Redmond, Washington.

Tirrell Award for Distinction in Undergraduate Research

Carolina Espinoza, a first-generation and community college transfer student, will receive the 2019 Tirrell Award for Distinction in Undergraduate Research, which recognizes graduating seniors who show excellence and promise as researchers during their academic careers. The annual award is named in honor of Matthew Tirrell, former dean of the college.

Espinoza spent the past two-and-a-half years working on research projects with chemistry and biochemistry professor Thuc-Quyen Nguyen and graduate student Brett Yurash. Her research centered on the development of organic semiconductors for applications in solar energy. One particular project on which she worked focused on improving photo conversion — the process by which two low energy photons combine to form one higher energy photon — in organic semiconductors.

"I am proud of the work I accomplished in the lab, and to be recognized for my research is truly amazing. I could not have come this far without my mentors and champions," said Espinoza, who will receive her bachelor's degree in chemical engineering and in the fall begin graduate school at University of Michigan, where she will pursue a Ph.D."I enjoy research for its ability to contribute to scientific advancement."

John and Sheila Lake Excellence Award

Mechanical engineering student Nathaniel Shankute is the recipient of the 2019 John and Sheila Lake Excellence Award, named for alumnus John Lake and his wife, Sheila, which award recognizes outstanding service and academic scholarship. After transferring from the Los Rios Community College District, Shankute became active in UCSB's Math, Engineering, Science and Achievement (MESA) Program, which helps educationally disadvantaged students become engineers and scientists. He served as president of the Engineering Student Council and as co-president of UC Santa Barbara's chapter of the National Society of Black Engineers (NSBE). In addition, he worked as a student researcher in Professor Sumita Pennathur's lab, focusing on nano and microfluids and the effects of asymmetric flows on particle migration. He also worked on Sonos Drip, a water ingress test chamber, as a Capstone Project. After graduation, Shankute plans to work at Sonos before returning to school to pursue a Ph.D. in fluid mechanics.

Outstanding Faculty and Teaching Assistant Awards

The senior class in each engineering degree program selected an outstanding faculty member and teaching assistant (TA). The class of 2019's Outstanding Faculty are Michael Gordon (chemical engineering), Yoga Isukapalli (computer engineering), Diba Mirza (computer science), Mark Rodwell (electrical engineering) and Elliot Hawkes (mechanical engineering).

The 2019 recipients of the outstanding TA awards are Koty McAllister (chemical engineering), Steve Bako (computer engineering), William Eiers (computer science), Michael Goebel (electrical engineering), and Jamie Booth (mechanical engineering).

About UC Santa Barbara

The University of California, Santa Barbara is a leading research institution that also provides a comprehensive liberal arts learning experience. Our academic community of faculty, students, and staff is characterized by a culture of interdisciplinary collaboration that is responsive to the needs of our multicultural and global society. All of this takes place within a living and learning environment like no other, as we draw inspiration from the beauty and resources of our extraordinary location at the edge of the Pacific Ocean.