UC SANTA BARBARA

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Off the Charts

Three graduating seniors and one distinguished faculty member have been honored for their outstanding contributions to undergraduate research at UC Santa Barbara.

The Chancellor's Award for Excellence in Undergraduate Research for 2020 has been awarded to Ethan Epperly, who will receive dual bachelor of science degrees in mathematics and computing from the College of Creative Studies; Stephanie Katz, who has earned a bachelor of arts degree of sociology; and Farbod Moghadam, who has earned a degree in chemistry.

Epperly in his junior year began doing research with Shivkumar Chandrasekaran, a professor of electrical and computer engineering, helping to organize all the literature on fast matrix algorithms, in which Chandrasekaran is considered a leading pioneer. Assigned a particularly difficult problem, Epperly both demonstrated that the problem was solvable and outlined a research program to extend his solution.

"The solution he proposed was difficult and non-obvious," Chandrasekaran said. "In my opinion the work he has done for his undergraduate thesis would have easily earned him a Ph.D. It is that deep and innovative, with broad applications in applied mathematics and computational science."

Epperly will next pursue a Ph.D. in applied and computational mathematics from California Institute of Technology.

Invited to apply by sociology professor Zakiya Luna, Katz was one of just 15 students selected for the 2019-2020 Honors Research Program. Her project, “The Trajectory of The Juvenile Justice and Delinquency Prevention Act Of 1974: Examining Policy Gaps for Girls,” traces policy from 1974-2018 to consider girls caught up in the justice system.

Katz’s resulting thesis “has practical implications for understanding criminalization of girls across time and how juvenile justice policy can become more attentive to their needs.

“Her thesis was well written, offered many insights and brought policy discussions and legislation to life, which can be a hard task,” Luna said in nominating Katz for the research award. “All the work Stephanie put into coding and developing different ways of analyzing the documents shows on the page. She also went beyond the typical ‘future research’ conclusion by giving policy recommendations as well.

“I place Stephanie Katz in the Top 5% of undergraduates with whom I have worked and envision her as a graduate student due to her intellectual curiosity and maturity.”

Still learning basic organic chemistry during his sophomore year, Moghadam began working with a senior graduate student. He was soon conducting graduate level research, ultimately making important contributions and co-authoring his first publication, which describes an important solution to the potential problem of surfactant foaming. He later took on a project to convert Nobel Prize winning Pd-catalyzed Negishi couplings, invented over 40 years ago, into a sustainable process.

Of Moghadam, nominating faculty member Bruce Lipshutz said, “Farbod is brilliant. He is, simply, off the charts.”

“Farbod Moghadam is the sort of student who comes along, if at all, once in a career,” Lipshutz said. “He has the entire package of innate talent, creativity, ambition, inner drive and temperament, ensuring that he will have an exceptional career in research.”

Following his graduation from UCSB, Moghadam has committed to attend CalTech, where he intends to pursue a doctoral degree in organic chemistry.

For her work with budding researchers in the Department of English, Professor Candace Waid was selected to receive the Chancellor’s Faculty Award for Undergraduate Mentoring.

Waid led a major mentorship initiative in joining undergraduate students with graduate student mentors in “The Faulkner Manuscript Project,” for which the undergraduates researched all of the manuscript material on the writer William Faulkner held in the UCSB and other UC libraries, explored what resources were available elsewhere, and finally, worked to understand how looking carefully at those materials (e.g. the handwritten notes for a novel) could inform thinking about the published work.

“The undergraduates involved are inspired to research Faulkner’s work and its sources at an extraordinary high level, and to encounter literature at a research level almost never granted to our undergraduates,” said Waid’s nominator and chair of English, Enda Duffy. The Faulker project, he added, is “characteristic of [Waid’s] approach as perhaps the key mentor of undergraduate students in the department.

“Professor Waid is an exemplary leader of undergraduate research mentorship in the humanities,” Duffy added. “She brings her own empathy, her intellectual interest, and above all her sense of identification with the most marginalized students in the UC system, to her outstanding work … I can think of no one who is more richly deserving of this honor.”

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.