UC SANTA BARBARA
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Harrison Tasoff

“Distinguished Efforts to Advance Science”

Nine UC Santa Barbara researchers have been named fellows of the American Association for the Advancement of Science (AAAS) for 2019. Election as a AAAS Fellow is an honor bestowed upon AAAS members by their peers for their scientifically or socially distinguished efforts to advance science or its applications.

“It is with great pride and joy that we congratulate our nine faculty colleagues on their election to the American Association for the Advancement of Science,” said UC Santa Barbara Chancellor Henry T. Yang. “This is a strong testament to their leadership and accomplishments, as recognized by their peers, in advancing scientific research in the interest of humanity. It also is a reflection of the breakthrough research being conducted within their fields as well as across the disciplines at UC Santa Barbara.”

The following UC Santa Barbara faculty members join 443 of their peers across the country as newly elected AAAS Fellows:

Elizabeth Belding — “For distinguished contributions to the field of networking, particularly network architectures, protocols, and measurement of mobile networks.”

A professor in the Department of Computer Science, Belding is an expert on mobile and wireless communication networks, including wireless LANs, mesh networks and cellular networks. Her current work focuses on information and communication

technology solutions for the developing world. This work includes the analysis of existing networks and the development of new network architectures and solutions specifically designed for the communities in which she works.

Cheryl Briggs — “For distinguished contributions to the field of disease ecology, particularly the effects of host-pathogen interactions on animal population dynamics.”

Briggs joined the Department of Ecology, Evolution, and Marine Biology faculty in 2007. Her research combines modeling and experiments to understand the factors affecting the dynamics of animal populations. Her lab is working on a number of projects involving disease-host or parasitoid-host interactions, including the frog-killing chytrid fungus in the Sierra Nevada and Lyme disease in Southern California.

Maria Charles — “For distinguished contributions to the scientific study of gender differences and gender role segregation in work and occupations worldwide, including in STEM fields.”

Charles is a professor in the Department of Sociology, where she studies gender inequalities around the world and the cultural and structural forces that sustain them in families, educational systems and labor markets. She coauthored the book, “Occupational Ghettos: The Worldwide Segregation of Women and Men.”

Hugo Loaiciga — “For eminent contributions to the understanding of the effects of climate processes on the safe yield of aquifers and sustainable groundwater management.”

Loaiciga served as the water commissioner for the city of Santa Barbara before joining the university’s Department of Geography in 1988. In 2010 he began working on sea level rise in California and its effect on coastal freshwater aquifers. He has several other projects underway, including groundwater hazards and seawater desalination with solar energy.

Alan Murray — “For many important contributions to location modeling, spatial optimization and decision support, and for teaching and service to the academy and professional societies.”

Murray joined UC Santa Barbara as a professor in the Department of Geography in 2016. His research and teaching interests include geographic information science,

urban growth and natural resource planning and development, and infrastructure and transportation systems, among other related topics. He has authored two books and more than 200 research articles, book chapters and proceedings papers.

Thuc-Quyen Nguyen — “For distinguish contributions to the field of organic electronics, particularly for structure-function-property relationships and device physics of organic solar cells.”

Nguyen joined the Department of Chemistry & Biochemistry in 2004. Her research lies at the dynamic confluence of organic chemistry and electronic. Nguyen’s current topics of interest include conjugated polyelectrolytes, optoelectronic devices, organic semiconductors, organic solar cell applications and molecular self-assemblies.

G. Robert Odette — “For outstanding contributions to understanding and predicting the microstructural evolution and mechanical property changes of structural materials in challenging nuclear, chemical, and thermal environments.”

Odette’s interests lie in building rigorous models for predicting material performance in hostile environments — including those in fission and future fusion reactors — as well as developing new, high performance, long-lived structural alloys and composites. Odette is a professor emeritus in UC Santa Barbara’s materials department.

David Valentine — “For outstanding contributions to understanding the interplay of microbes and hydrocarbons in the ocean, and for relaying that understanding to diverse audiences.”

Valentine, of the Department of Earth Sciences, studies biogeochemistry, a field at the interface between the biotic and abiotic worlds. His focus lies in archaea, the microbial ecology of hydrocarbons, and the development of novel isotopic approaches to study microbes and geochemical processes.

Yuan Xie — “For distinguished contributions to the field of computer architecture and electronic design automation, particularly three-dimensional integrated circuits and memory architectures.”

Xie researches computer architecture, electronics design automation and embedded systems design in the Department of Electrical and Computer Engineering. His

application-driven research projects include novel architectures for artificial intelligence as well as hardware acceleration for emerging applications such as bio-informatics, graphics analytics and robotics.

Each new AAAS Fellow will receive an official certificate and a gold and blue rosette pin at the AAAS Fellows Forum, which will take place during the 2020 AAAS Annual Meeting in February in Seattle, Washington.

The American Association for the Advancement of Science was founded in 1848 and has become the world’s largest general scientific society. The non-profit organization includes more than 250 affiliated societies and academies of science, serving 10 million individuals. The association also publishes many eminent scientific journals including Science.

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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.