

FACULTY AWARDS AND RECOGNITIONS

JUNE 2021 – MARCH 2022

UC Santa Barbara College of Engineering faculty receive many of the most prestigious awards and honors bestowed by academic and professional societies in recognition of their leading-edge research and contributions to their fields. Here are some of the faculty who were recognized by their peers between June 2021 and March 2022.



MAHDI ABU-OMAR

Professor, Chemical Engineering, Mellichamp Chair of Green Chemistry

Affordable Green Chemistry Award; American Chemical Society

The award recognizes a chemist for outstanding scientific discoveries of eco-friendly chemistries that may enable less-expensive products or manufacturing processes. Abu-Omar's group focuses on solving the growing plastics waste problem by investigating novel ways to reuse plastics, and working to create the science that can provide renewable and recyclable alternatives to traditional petrochemical-based materials.



CHRISTOPHER BATES

Assistant Professor, Materials, Chemical Engineering

Rising Star in Polymers in 2021, ACS Polymers Au

Bates was one of thirteen early-career polymer scientists named Rising Stars in Polymers and invited to submit a peer-reviewed paper for a special issue of *ACS Polymers Au*, the open-access journal of the American Chemical Society. His paper discussed a new class of super-soft conductive elastomers that he and collaborators developed by leveraging a highly branched bottlebrush polymer architecture. Their findings will be useful in applications where both softness and conductivity are valuable, such as wearable electronics



JOHN BOWERS

Distinguished Professor, Materials, Electrical and Computer Engineering; Kavli Professor of Nanotechnology

Elected Fellow, American Association for the Advancement of Science; Highly Cited Researchers List, Clarivate Analytics

Bowers was recognized by the AAAS for his "pioneering research in silicon photonics, including hybrid silicon lasers, photonic integrated circuits, and ultra-low-loss waveguides. A world-leading researcher in the areas of silicon photonics, optoelectronics, energy efficiency, and the development of novel low-power optoelectronic devices, Bowers was also recognized among the top one percent of his field based on the number of times his published papers have been cited by peers.

PHILLIP CHRISTOPHER

Professor, Chemical Engineering; Mellichamp Chair of Sustainable Manufacturing

Ipatieff Prize, American Chemical Society

Christopher received the triennial national award that recognizes an individual under the age of forty for outstanding chemical experimental work in the field of catalysis or high pressure. Christopher's research group builds and designs reactors and uses light, spectroscopy, and microscopy to probe the structure and function of catalysts in order to gain molecular-level insights that enable the design of more sustainable materials and more environmentally friendly catalytic processes.



JAMES BUCKWALTER

Professor, Electrical and Computer Engineering

Elected Fellow, Institute of Electrical and Electronics Engineers

The IEEE Board of Directors elevated Buckwalter's status to the grade of Fellow in recognition of his "contributions to high-efficiency millimeter-wave power amplifiers and optical transceivers in silicon-on-insulator (SOI) technologies.



KEREM CAMSARI

Assistant Professor, Electrical and Computer Engineering

Young Investigator Award, Office of Naval Research

Camsari was one of thirty-two junior faculty selected to receive the prestigious award. He will receive a three-year, \$510,000 grant in support of his work to design a probabilistic computer to solve computational problems faster and more efficiently. His work could address problems such as supply-chain logistics, traffic optimization, tactical communications, and probabilistic-decision making.



RAPHAËLE CLÉMENT

Assistant Professor, Materials

Early CAREER Award, National Science Foundation

Clément received the foundation's most prestigious award given to early-career faculty in support of her work to investigate new materials for sodium-ion batteries. Her work could eliminate issues of toxicity, raw materials supply, and cost that plague current lithium-ion batteries. For more on her project, see page 14.

XI DAI

Professor, Materials

Highly Cited Researchers List, Clarivate Analytics

A leading expert in the theory of quantum materials, Dai was identified among the top one percent of his field based on citations. Scientists on the annual list have demonstrated significant and broad influence in their research areas, reflected in their publication of multiple papers that were highly cited by their peers over the past decade.





SAMANTHA DALY

Professor, Mechanical Engineering

Elected Fellow, American Society of Mechanical Engineers

Daly was elected in recognition of significant engineering achievements. Her research group specializes in the application of experimental mechanics to materials science in an effort to characterize, design, and develop advanced materials.

STEVEN DENBAARS

Mitsubishi Distinguished Professor of Materials and Electrical and Computer Engineering

AAAFM-Nakamura Award, American Association for Advances in Functional Materials

DenBaars was recognized for his pioneering work with gallium nitride (GaN), a highly efficient and high-performing semiconductor material that is the foundation of energy-efficient lighting, micro-LED displays, power electronics, and laser diodes. The honor was given to an outstanding scientist in the field of functional materials who has made significant contributions and whose work shows significant innovation in the field.



UMESH MISHRA

Donald W. Whittier Distinguished Professor, Electrical and Computer Engineering

Jun-ichi Nishizawa Medal, Institute of Electrical and Electronics Engineers

Mishra was recognized for his "contributions to the development of gallium-based electronics." The medal is awarded annually to one individual in the fields of materials science and device technologies.



GALAN MOODY

Assistant Professor, Electrical and Computer Engineering

Research Award, Cisco Research

The research award will allow Moody to work with Cisco's new Quantum Research team to design, fabricate, and test prototype devices that use a photon as an optical qubit to encode quantum information. The collaboration allows Moody to transition from fundamental research to engineering and developing quantum technologies that could eventually lead to commercialization.



YUFEI DING

Assistant Professor, Computer Science

Research Award, Cisco

With support from Cisco, Ding will pursue novel quantum computing research activities from a programming system perspective. Her analysis of optimization problems in quantum circuit distribution could help researchers build a network of connected quantum devices.



JOHN HARTER

Assistant Professor, Materials

Early CAREER Award, National Science Foundation; Faculty Fellowship, Hellman Family Fellowship Foundation

Harter received the prestigious Early CAREER Award to conduct experimental research on a special type of superconductivity called odd-parity superconductivity. His work could have far-reaching consequences for quantum technology.



PAUL LEONARDI

Duca Family Professor, Technology Management

Elected Fellow, International Communication Association

Leonardi was elected in recognition of distinguished scholarly contributions to the broad field of communication. His research is focused on how companies can design their organizational networks and implement new technologies to more effectively create and share knowledge. (For more on his new book, see page 38.)



LEI LI

Assistant Professor, Computer Science

Best Paper Award, Association of Computational Linguistics

Li and his co-authors received the best paper award out of 3,350 submissions to ACL, the leading conference on NLP. The paper explores an optimal and efficient vocabulary learning algorithm, VOLT, for improved performance in machine translation.

SHUJI NAKAMURA

Distinguished Professor, Materials, Electrical and Computer Engineering ; Cree Professor of Solid State Lighting and Displays

Richard J. Goldstein Energy Lecture Award, American Society of Mechanical Engineers

The award recognizes the Nobel Laureate for his "transformational innovation in energy-conserving electronic and photonic materials, particularly pioneering work in light emitters based on wide-bandgap semiconductors and the invention of efficient blue-light emitting diodes that have rendered substantive bright and energy-saving white light sources".



IGOR MEZIC

Professor, Mechanical Engineering

Elected Fellow, Institute of Electrical and Electronics Engineers

Mezić was honored by the IEEE for his "contributions to modeling and control using Koopman operator techniques." The Koopman operator theory is a sophisticated mathematical approach of using data-driven analysis of nonlinear flows to understand and forecast dynamical systems.



MICHELLE O'MALLEY

Professor, Chemical Engineering

Allan P. Colburn Award for Excellence in Publications, American Institute of Chemical Engineers

The award is presented to a young scientist who made significant contributions to chemical engineering through publications. O'Malley was honored for "engineering unusual microorganisms from nature for biomass deconstruction and novel bioprocessing." Her research set the foundation for engineering microbial interactions in anaerobes to accelerate biomass breakdown and investigate how microbes partner in nature and bioreactors.



NELSON PHILLIPS

Professor, Technology Management

Elected Fellow, Academy of Management

Phillips was honored for his significant contributions to the science and practice of management. As an organizational theorist, Phillips focuses his research on how humans organize, and particularly, how people and technology come together in organizations.



TRESA POLLOCK

Interim Dean and Alcoa Distinguished Professor, Materials

Elected Honorary Member, French Society of Metallurgy and Materials

Pollock received the title of Honorary Member in recognition of her outstanding services in metallurgy and materials. Her recent research has been focused on developing a femtosecond laser-aided 3-D tomography technique, damage detection and modeling by resonant ultrasound spectroscopy, thermal barrier coatings systems, new intermetallic-containing cobalt-base materials, nickel-based alloys for turbine engines, and lightweight magnesium alloys.

TIMOTHY SHERWOOD

Professor, Computer Science

Elected Fellow, Institute of Electrical and Electronics Engineers; Research Highlight Award, Communications of Association of Computing Machinery

Sherwood was elected a fellow for his "contributions to computer system security and performance analysis." An article that he co-wrote with **Dmitri Strukov** (see below) and other colleagues was also featured by ACM. Only two papers out of all computer architecture publications are selected each year for this award. Sherwood develops novel high-throughput hardware and software methods to monitor and analyze systems. Such techniques offer critical insight on performance anomalies, energy efficiency, and software bugs.

DMITRI STRUKOV

Professor, Computer Science

Research Highlight Award, Communications of Association of Computing Machinery

An article that Strukov co-wrote with **Timothy Sherwood** (see above) and other colleagues was selected for a Research Highlight Award by ACM. Only two papers out of all computer architecture publications are selected each year for this award. In the paper, researchers discuss the natural relationship between modern decision-tree algorithms and new advances in race logic, demonstrate extremely energy-efficient classification, and generate excitement around broader in-sensor processing applications.



CHRIS VAN DE WALLE

Professor, Materials ; Kroemer Professor of Materials Science

Highly Cited Researchers List, Clarivate Analytic

This was the fifth straight year that Van de Walle earned a spot on the annual list that identifies scientists who are in the top one percent of their field by citations. They have demonstrated significant and broad influence in their fields, which is reflected in their publication of multiple papers that were highly cited by their peers over the past decade.



ZHENG ZHANG

Assistant Professor, Electrical and Computer Engineering

Ernest S. Kuh Early Career Award, IEEE Council on Electronic Design Automation

Zhang was honored for his "contributions towards fundamental stochastic computation methods for circuit simulation and testing beyond." The annual award recognizes a junior faculty member who has made substantial contributions to the area of electronic design automation.

YANGYING ZHU

Assistant Professor, Mechanical Engineering

Pi Tau Sigma Gold Medal, American Society of Mechanical Engineers

The annual award celebrates one individual's outstanding contributions to mechanical engineering within the first ten years of earning a bachelor's degree. Zhu's research focuses on using thermo-fluid engineering approaches to address challenges in energy storage, thermal management of electronics, water harvesting, and transmittance of respiratory diseases.



FUN FACT #1 public university in percentage of eligible junior faculty who received NSF Early CAREER Awards from 2016-'21.

AWARD-WINNING COE STUDENTS AND POSTDOCTORAL RESEARCHERS

JUNE 2021 – MARCH 2022

Numerous undergraduate and graduate students, as well as postdoctoral scholars in the College of Engineering have received national recognition for their work while in pursuit of discovery. Recently, eleven engineering students were offered prestigious graduate research fellowships from the National Science Foundation, a distinction that provides three years of financial support, totaling \$138,000 apiece. The Graduate Research Fellowship Program is the nation's oldest fellowship program that recognizes and supports outstanding graduate students pursuing research-based graduate degrees in STEM disciplines. Here is a look at some additional awards received by COE students and postdocs between June '21 and March '22.



SHAIMAA AZZAM

Postdoctoral Researcher, Electrical and Computer Engineering
Advised by Galan Moody

Participant, EECS Rising Stars Workshop



DHEERAJ BABY

PhD Student, Computer Science
Advised by Yu-Xiang Wang

Best Student Paper, Conference on Learning Theory



JUAN CHAMORRO

Postdoctoral Fellow, Materials
Advised by Stephen Wilson and Ram Seshadri

MPS-Ascend Fellowship, National Science Foundation



SANJAY CHANDRASEKARAN

PhD Student, Computer Science
Advised by Arpit Gupta

Research Fellowship, M-Lab



MARISSA GIONET-GONZALES

Postdoctoral Researcher, Mechanical Engineering
Advised by Beth Pruitt and Ryan Stowers

eFellow, NSF/ASEE; President's Postdoctoral Fellowship, Univ. of California



SAMHITA HONNAVALLI

Undergraduate, Computer Science
Advised by William Wang and Diba Mirza

Outstanding Researchers Award Honorable Mention, Computing Research Association



GYUWAN KIM

PhD Student, Computer Science
Advised by William Wang

Best Paper Award, Simple and Efficient NLP Workshop



SHARON LEVY

PhD Student, Computer Science
Advised by William Wang

Research Fellowship, Amazon



SUJAYA MAIYYA

PhD Student, Computer Science
Advised by Amr El Abbadi and Divyakant Agrawal

Participant, EECS Rising Stars Workshop



AESHA PAREKH

Undergraduate, Computer Science
Advised by William Wang and Diba Mirza

Outstanding Researchers Award Finalist, Computing Research Association



KAMYAR PARTO

PhD Student, Electrical and Computer Engineering
Advised by Kaustav Banerjee and Galan Moody

Graduate Student Research Fellowship, Department of Energy



SHLOMI STEINBERG

PhD Student, Computer Science
Advised by Lingqi Yang

Graduate Research Fellowship, NVIDIA



TIANQI TANG

PhD Student, Electrical and Computer Engineering
Advised by Yuan Xie

Participant, EECS Rising Stars Workshop



VIRGILE THIÉVENAZ

Postdoctoral Scholar, Mechanical Engineering
Advised by Alban Sauret

Milton Van Dyke Award, American Physical Society



YUKE WANG

PhD Student, Computer Science
Advised by Yufei Ding

Graduate Fellowship, NVIDIA



ELI ZOGHLIN

PhD Student, Materials
Advised by Stephen Wilson

Graduate Student Research Fellowship, Department of Energy