

Faculty Awards 2023-'24

Each year, UC Santa Barbara College of Engineering faculty receive many of the most prestigious honors awarded by academic and professional societies in recognition of their innovative research and their discovery of new scientific knowledge. Here is a sampling of the honors bestowed upon our faculty by their peers since July 1, 2023.

Shuji Nakamura

Professor, Electrical and Computer Engineering and Materials

LpS Digital Innovation Award, LpS Digital Summit

The premier digital-lighting conference honored Nakamura, who received the 2014 Nobel Prize in Physics for inventing the blue LED, for impactful contributions to energy and lighting, and for his dedication to global sustainability.



Raphaële Clément

Assistant Professor, Materials

Rising Star Award, Materials Today; ISE Prize for Electrochemical Materials Science, International Society of Electrochemistry; Camille Dreyfus Teacher-Scholar Award

Clément recently received three significant junior-faculty awards in recognition of her work in the field of electrochemical materials science and her research group's efforts to relate materials synthesis, atomic structure, and performance in battery devices (see P. 18), using, mostly, magnetism and magnetic-resonance probes.



Beth Pruitt

Professor, Bioengineering and Mechanical Engineering; Chair, Bioengineering

Elected Fellow, American Association for the Advancement of Science

Pruitt, the Mehrabian Chancellor's Chair, was elected a Fellow by her peers in the American Association for the Advancement of Science for her "seminal contributions to developing custom measurements and analysis systems for cell-level studies of biomechanics, mechanotransduction, and pathways in cell-cell adhesion and subcellular organization, and exceptional sponsorship for bioengineering."



Prabhanjan Ananth

Assistant Professor, Computer Science

Early CAREER Award, National Science Foundation

Ananth, who is the Glenn and Susanne Culler Chair, will receive more than \$660,000 over five years from the National Science Foundation to develop the foundations of unclonable cryptography and algorithms that could be secure against an attack by a quantum computer.



Irene Beyerlein

Mehrabian Interdisciplinary Professor, Mechanical Engineering and Materials

Elected Member, National Academy of Engineering

Election to the NAE is one of the highest distinctions accorded to an engineer. Beyerlein was recognized for her "methodologies predicting the mechanics of complex engineering materials to improve their stability and strength."



Yangying Zhu

Assistant Professor, Mechanical Engineering

Young Investigator Award, Office of Naval Research; Faculty Fellowship, Hellman Foundation

Zhu will receive \$750,000 over three years to investigate a promising method for cooling high-performance devices. Knowledge gained from her work could be applied to solar thermal desalination, thermal management of data centers, and robotics that might be actuated by liquid-vapor phase change.



Haewon Jeong

Assistant Professor, Electrical and Computer Engineering

Early CAREER Award, National Science Foundation

Jeong received a five-year, nearly \$600,000 grant to analyze the data-preparation pipeline in order to make end-to-end equitable machine learning possible. She will examine real-world dataset problems, such as missing values and data imbalance, to determine how bias can be either amplified or mitigated during the process of preparing data.



Paul Leonardi

Duca Family Professor and Chair, Technology Management
Distinguished Scholar Award, Communication, Technology, and Organizing Division of the Academy of Management

Leonardi received the award in recognition of his sustained body of high-impact work. An expert on the digital transformation in the workplace, Leonardi studies how companies that implement new technologies are affected and how they can use them to their advantage.



James Marden

Professor, Electrical and Computer Engineering
Fellow, Institute of Electrical and Electronics Engineers

Marden was elevated by his peers to the status of Fellow in recognition of his "contributions to game theory for distributed control systems." His work focuses on engineering desired behavior in sociotechnical systems, which are systems comprising both engineered and social components.



Robert McMeeking

Distinguished Professor, Materials and Mechanical Engineering
Platinum Medal, Institute for Materials, Minerals, and Mining

McMeeking, who has a distinguished career as a computational materials scientist, received the medal for his "wide-ranging contributions to micromechanics that have inspired a new generation of mechanics researchers in both the United States and the United Kingdom."



Enoch Yeung

Assistant Professor, Mechanical Engineering
Early CAREER Award, National Science Foundation

Yeung received a \$640,000 Early CAREER Award from the National Science Foundation to conduct research on the dynamics of DNA structure and how it affects genetic programs in living cells.



Christopher Kruegel

Professor, Computer Science
Elected Fellow, Association for Computing Machinery

Kruegel, who is an expert on computer security, was elected as a Fellow by his peers in the Association for Computing Machinery in recognition of his significant "contributions to systems security, malware detection, and vulnerability analysis."



Larry A. Coldren

Emeritus Professor, Materials and Electrical and Computer Engineering
Heinrich Welker Award, International Symposium on Compound Semiconductors

The Welker Award recognizes Coldren for high achievement in materials technology, resulting in seminal contributions to tunable lasers, vertical cavity lasers, and photonic integrated circuits.



Siddarth Dey

Assistant Professor, Chemical Engineering and Bioengineering
Early CAREER Award, National Science Foundation

Dey received a five-year, nearly \$1 million Early CAREER Award for his research, aimed at understanding how spatial and epigenetic factors in cells regulate gene expression during human development.



Michael Gordon

Professor and Chair, Chemical Engineering
Elected Fellow, American Vacuum Society

Gordon, the Warren G. and Kathleen S. Schlinger Professor of Chemical Engineering, was cited for "advances in synthesis, characterization, engineering, and simulation of nanostructured materials for applications in optoelectronics, energy, chemical conversion, and biology."



Tresa Pollock

Alcoa Distinguished Professor, Materials
William D. Nix Award, The Minerals, Metals & Materials Society

As a testament to her impact as a researcher and a mentor, Pollock was recognized for her "seminal contributions to the creep and fatigue behavior of structural alloys and underlying deformation mechanisms," and for "inexhaustible devotion to the mentoring of early-career scientists."



COE ranks fourth among public universities in percentage of faculty (10%) who are elected members of the National Academy of Engineering.

Faculty Awards



Michelle O'Malley
Professor, Chemical Engineering and Bioengineering
Biotechnology Progress Award for Excellence in Biological Engineering Publication, American Institute of Chemical Engineers
O'Malley, the Scholle Chair in Chemical Engineering, was recognized by the Society for Biological Engineering for her outstanding contributions to the literature in the field.

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The number of COE faculty NSF CAREER Awards received in 2023-'24, tying the record for most in an academic year



John Bowers
Distinguished Professor, Electrical and Computer Engineering and Materials
Jun-ichi Nishizawa Prize, Institute of Electrical and Electronics Engineers
Bowers, the Fred Kavli Chair in Nanotechnology and the director of UCSB's Institute for Energy Efficiency (see P. 12), was honored for his "contributions to photonic integrated circuit technologies." The award recognizes Bowers for the impact his innovations have made on his profession and the world.



Philip Christopher
Professor and Vice Chair, Chemical Engineering
Giuseppe Parravano Award for Excellence in Catalysis Research, Michigan Chapter of the North American Catalysis Society
The biennial award recognized the Mellichamp Chair of Sustainable Manufacturing for "outstanding achievement in the conduct of clever, productive, and influential research on problems of central interest and importance in catalysis and related fields."



Misha Sra
Assistant Professor, Computer Science
Early CAREER Award, NSF; Faculty Fellowship, Hellman Foundation
Sra, the John and Eileen Gerngross Chair, received a five-year, nearly \$600,000 Early CAREER Award to harness artificial intelligence, virtual reality, and augmented reality to enhance a human's physical abilities to learn and recover motor skills.



Chris Van de Walle
Professor, Materials
Materials Theory Award, Materials Research Society
The leading professional society dedicated to advancing materials science honored Van de Walle for his contributions in developing first-principles methodologies for understanding how point defects affect light emissions in wide-bandgap semiconductors.



Nina Miolane
Assistant Professor, Electrical and Computer Engineering
Early CAREER Award, National Science Foundation; Faculty Fellowship, Hellman Foundation
Miolane received a five-year, nearly \$500,000 Early CAREER Award to further develop methods to precisely quantify every nuance of geometries captured in live 3D images, an accomplishment that could enable breakthroughs in data-driven biomedicine.



M. Scott Shell
Professor, Chemical Engineering
Elected Fellow, American Association for the Advancement of Science
Shell, the John Myers Founder's Chair, was elected a Fellow by his peers in the American Association for the Advancement of Science in recognition of his "creative contributions to molecular simulations in the chemical sciences, including powerful methods for coarse-graining and free-energy estimation."



William Wang
Mellichamp Professor of Artificial Intelligence, Computer Science
Pierre-Simon Laplace Early Career Technical Achievement Award, Institute for Electrical and Electronics Engineers
IEEE's Signal Processing Society recognized Wang for his "contributions to the development of scalable algorithms in natural language processing."