

# 2022 Highlights

# Berkeley Research

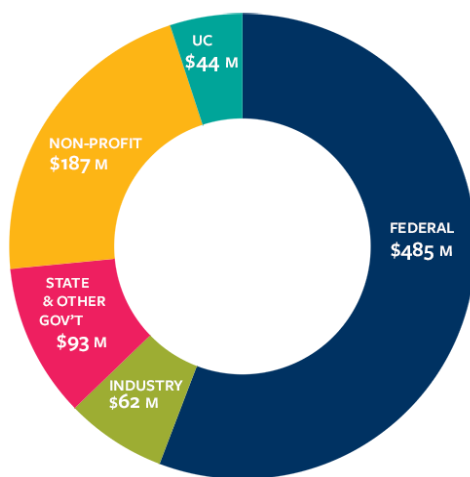
UNIVERSITY OF CALIFORNIA

## RESEARCH EXCELLENCE

### Sponsored Research

Each year, the UC Berkeley campus receives close to a billion dollars in research support from external source. In the fiscal year ending June 30, 2022, UC Berkeley attracted \$871 million in new research funding. Many of these research awards fund multi-year projects with expenditures that continue in subsequent years. The federal government provided 56 percent, non-profit partners provided 22 percent, and California state agencies and other government sources, industry, and UC provided the rest. Of the research funding provided by the US government, the largest contributors are the National Institutes of Health, the National Science Foundation, the Department of Education, and NASA. The largest 2021/22 awards focus on new research efforts in **nuclear non-proliferation, digital workforce development, earthquake engineering, pathogen research, imaging and nano-materials.**

### 2021/22 Research Funding by Sponsor in Millions



July 2022

**Total Awards = \$871 million**  
Calculated on the basis of project period

## PRECISION HEALTH

### UC Berkeley-UCSF Collaboration

Launched in fall 2021, this one-of-a-kind program in **computational precision health** represents a significant step toward advancing this new field and, ultimately, improving the quality and equity of health care. The partnership positions the two world-renowned universities at the forefront of creating a new field at the intersection of medicine, statistics and computation. By creating a joint faculty group between UC Berkeley and UCSF, the two universities will simultaneously advance computing and data science with biomedicine and health, enabling solutions that would not have been imagined

## CLIMATE CHANGE

### Data Science for the Environment

A significant gift from alumni Eric and Wendy Schmidt established a new research center for data science and environment. The **Schmidt Center** aims to tackle climate change and biodiversity loss among other environmental challenges, by combining advance data science techniques with cutting-edge environmental science.

## SCIENCE ETHICS

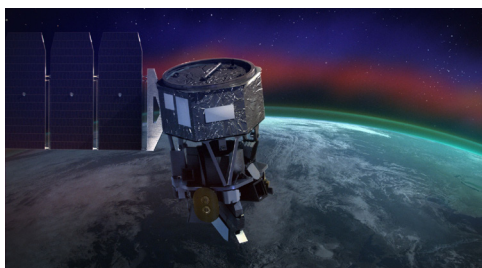
### New Kavli Center



Launched in late 2021, a new **Kavli Center** provides a multidisciplinary framework for understanding the ethical implications of science and technology and guiding the development of policy concerning anticipated scientific advances. Initial focus areas include neuroscience, artificial intelligence and genome editing.

## SPACE SCIENCE

### Aerospace Innovation

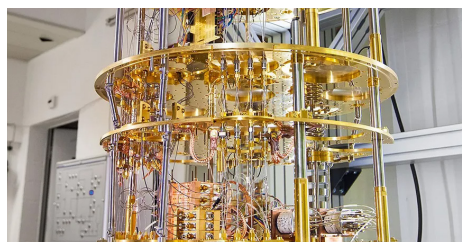


The campus' Space Science Lab (SSL) recently helped add the **Ionospheric Connection Explorer (ICON)** to NASA's fleet of Heliophysics satellites. Led by UC Berkeley, scientists and engineers around the world are coming together to use the ICON mission to better understand the tug-of-war between Earth's atmosphere and the space environment. SSL also participates in the **Parker Solar Probe** mission that will revolutionize our understanding of the sun. The Parker Solar Probe provides new data on solar activity and makes critical contributions to our ability to forecast major space-weather events that impact life on Earth. In addition, in fall 2022 the campus launched a new aerospace engineering major.

## PHYSICS AND ENGINEERING

### Quantum Computing

At the center of the quantum computing revolution, UC Berkeley leads the **Challenge Institute for Quantum Computation**, one of five large collaborative NSF-funded centers to advance the frontiers of this promising field. UC Berkeley faculty also have major roles in the **Quantum Systems Accelerator**, a major quantum information research consortium led by Berkeley Lab. These and other quantum research activities at Berkeley advance new quantum computing technologies that promise to underpin new insights in diverse scientific areas, including genomics or the detection and interpretation of gravity wave signals.



## Faculty Excellence 2022

Berkeley faculty are leading the charge in many disciplines to make profound changes in the way we understand and interact with the world. Highlights include:



*Nobel Laureate*

### DAVID CARD

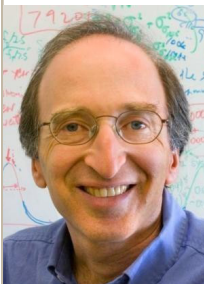
David Card won the 2021 Nobel Prize in Economic Sciences for work that challenged orthodoxy and shifted our understanding of inequality and the social and economic forces that impact low-wage workers.



*Nobel Laureate*

### JENNIFER DOUDNA

2020 Nobel Laureate Jennifer Doudna is best known for her pioneering work on CRISPR/Cas9, a tool for editing genes that offers a potent new approach to understand and treat complex genetic diseases.



*Nobel Laureate*

### SAUL PERLMUTTER

Saul Perlmutter received the 2011 Nobel Prize in Physics. He led one of the two research teams that simultaneously discovered the accelerating expansion of the universe.



*Nobel Laureate*

### RANDY SCHEKMAN

Randy Schekman received the 2013 Nobel Prize in Physiology or Medicine for his role in revealing the machinery that regulates the transport and secretion of proteins in our cells.



*Energy Secretary*

### JENNIFER GRANHOLM

Jennifer Granholm joined President Joe Biden's cabinet as Energy Secretary in 2021. A UC Berkeley alumna, Granholm taught courses and served on the faculty of the Goldman School of Public Policy.



*Treasury Secretary*

### JANET YELLEN

Janet Yellen was appointed Treasury Secretary in early 2021. She served as Chair of the Federal Reserve from 2014-2018. Prior to that, she was a distinguished faculty member in Business Administration and Economics at UC Berkeley.

## Berkeley Counts Among Its Faculty:

**10** Nobel Laureates

**6** Recipients of the A.M. Turing Award

**1** Recipient of the Fields Medal in Mathematics

**24** Howard Hughes Medical Institute Investigators

**33** MacArthur Fellows

**1** National Poet Laureate

**364** Guggenheim Fellows

**4** Winners of the Pulitzer Prize

**15** Recipients of the National Medal of Science

**251** Fellows of the American Academy of Arts and Sciences

**90** Members of the National Academy of Engineering

**144** Members of the National Academy of Sciences

**7** Awardees of the Presidential Early Career Award for Scientists and Engineers

**15** Fellows of the National Academy of Inventors

**49** American Philosophical Society Members