

Berkeley Research

New COLLABORATION WITH NASA Berkeley Space Center Launched



The University of California, Berkeley is teaming up with NASA's Ames Research Center and developer SKS Partners to create research space for companies interested in collaborating with UC Berkeley and NASA scientists and engineers to generate futuristic innovations in aviation, space exploration and how we live and work in space. The Berkeley Space Center aims to accommodate up to 1.4 million square feet of research space on 36 acres of land leased at NASA Ames' Moffett Field in Mountain View. The new buildings, some of which could be ready for move-in as early as 2027, will house state-of-the-art research and development laboratories for companies and UC Berkeley researchers, and classrooms for UC Berkeley students. These students will benefit from immersion in the Silicon Valley start-up culture and proximity to the nation's top aeronautical, space and Al scientists and engineers at Ames.

Learn more: Berkeley Space Center

Sponsored Research

2022/23 was another banner year for UC Berkeley researchers bringing over \$1 billion dollars in support from external sources to the campus. This is a 20 percent increase over the previous year. Growth was driven in part by new support from state and other government sources, with the federal government providing 45 percent and state and other governments 21 percent. Non-profit partners accounted for almost 25 percent in the fiscal year ending June 30, 2023. Of the research funding provided by the US government, the largest contributors are NASA, the National Institutes of Health, and the National Science Foundation. The largest 2022/23 awards focus on new research efforts in the life sciences, political economy, lunar surface experiments, as well as computing and climate change.

2022/23 Research Funding by Sponsor in Millions



Total Awards = \$1.07 billion Calculated on the basis of project period

NEUROSCIENCE BREAKTHROUGH Decoding Pink Floyd in Your Brain

UC Berkeley researchers recently recreated a Pink Floyd song using previously recorded brain waves. The group of neuroscientists, led by Professor Robert Knight, decoded songs from brain recordings, revealing areas dealing with rhythm and vocals. The reconstruction shows the feasibility of recording and translating brain waves to capture the musical elements of speech, as well as the syllables. In the words of Professor Knight, the implications are profound. "As this whole field of brain machine interfaces progresses, this gives you a way to add musicality to future brain implants for people who need it, someone who's got ALS or some other disabling neurological or developmental disorder compromising speech output. It gives you an ability to decode not only the linguistic content, but some of the prosodic content of speech, some of the affect. I think that's what we've really begun to crack the code on." Learn more: Decoding Pink Floyd

CLIMATE RESEARCH

Rising Groundwater Threatens Toxic Sites in Bay Area

As climate change brings devastating storms and rising tides to California, many coastal communities face another threat, one that is hidden and trickling up from below. A new study, led by Professor Kristina Hill, finds that over the next century, rising groundwater levels in the San Francisco Bay Area could impact twice as much land area as coastal flooding alone, putting more than 5,200 state- and federally-managed contaminated sites at risk. Many of these sites are near communities already burdened with high levels of pollution, including West Oakland, the waterfront in Richmond and Hunters Point in San Francisco.

Learn more: Rising Groundwater

Faculty Excellence 2023/24

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 | A.M. Turing Award Recipients |
| 2 | Fields Medal in Mathematics Recipients |
| 24 | Howard Hughes Medical Institute Investigators |
| 21 | MacArthur Fellows |
| 1 | National Poet Laureate |
| 73 | Guggenheim Fellows |
| 4 | Pulitzer Prize Winners |
| 10 | National Medal of Science Recipients |
| 241 | American Academy of Arts and Science Fellows |
| 68 | National Academy of Engineering Members |
| 137 | National Academy of Sciences Members |
| 27 | Presidential Early Career Award for Scientists and Engineers Awardees |
| 17 | National Academy of Inventors Fellows |
| 39 | American Philosophical Society Members |

More information: http://vcresearch.berkeley.edu | Questions: research@berkeley.edu