National Science Foundation

CALIFORNIA

FY 2022 Fast Facts

$1,099,822,000
Total NSF Awards to California

$893,214,000
Invested in Fundamental Research in California

$193,367,000
Invested in STEM Education in California

$46,517,000
Invested in California Businesses

Top NSF-funded Academic Institutions for FY 2022

University of California San Diego	University of California Berkeley	California Institute of Technology
$114,854,330	$100,112,026	$78,641,333

NSF By The Numbers

The National Science Foundation (NSF) is a $9.5 billion independent federal agency created by Congress in 1950 to promote the progress of science; to advance the national health, prosperity, and welfare; to secure the national defense. NSF's vital role is to support basic research and researchers who create knowledge that transforms the future.

11K Number of awards NSF funds each year

$9.9B FY 2023 Enacted

39K Proposals evaluated

$1.6B STEM education

1.8K NSF-funded institutions

93% Funds research, education and related activities

352K People NSF supported

258 NSF-funded Nobel Prize winners

Data represents FY 2022 Actuals unless otherwise indicated.

Expanding the Frontiers of Science

Improved optimizations of energy efficiency, safety, robustness and other criteria in engineered systems offer the promise of incalculable societal benefits. However, challenges of scale and complexity keep many real-world optimization needs beyond our reach. The mission of The Institute for Learning-Enabled Optimization at Scale, or TILOS, funded by NSF, is to make impossible optimizations possible at scale and in practice. The institute, led by the **University of California San Diego**, pioneers learning-enabled optimizations that transform chip design, robotics, communication networks and other use domains that are vital to the nation's health, prosperity and welfare. Industry partners interact closely with TILOS on both foundational research and its use-domain application. TILOS builds an openly accessible program of continuing education with lifelong learning and skills renewal as its central tenet. This institute also broadens participation, building on the visible successes of its partner institutions that have reached underserved demographics from K-12 onward. Through these efforts, TILOS discovers, teaches and translates into real-world practice a new nexus of artificial intelligence, optimization and use.

STEM Education

The NSF Research Traineeship, or NRT, program encourages the development and implementation of bold, potentially transformative models for STEM graduate education training. The program is dedicated to effective training of STEM graduate students in high-priority interdisciplinary or convergent research areas through comprehensive traineeship models that are innovative, evidence-based and aligned with changing workforce and research needs. With NSF support, the **University of California, Davis** launched an NRT project, NeuralStorm, that develops a graduate curriculum that allows students to gain expertise within a specific area (e.g., computer science, engineering, medicine) while also contributing to cross-disciplinary problem-solving in neuroengineering. Neuroengineering has the potential to transform society at all levels by restoring function for people with neural deficits, disease, or injury while also providing unprecedented insights into brain function. The project anticipates training 70 doctoral and 20 masters' students — including 30 funded trainees — from computer science, engineering, neuroscience, and psychology.

Regional Innovation Engines

The NSF Engines program envisions fostering flourishing regional innovation ecosystems across the country, providing a unique opportunity to spur economic growth in regions that have not fully participated in the technology boom of the past few decades. The NSF Engines program uniquely harnesses the nation's science and technology research and development enterprise and regional-level resources. NSF Engines can catalyze robust partnerships rooted in scientific and technological innovation to positively impact the economy within a geographic region, address societal challenges, and advance national competitiveness. Find potential NSF engines in your state.

Infrastructure

Through a Major Research Instrumentation award, **Occidental College** acquired an automated particle size analyzer. The equipment will support student research training in geology and biology at this undergraduate Hispanic-serving institution.

NCSES

According to the National Center for Science and Engineering Statistics (NCSES), which is housed in NSF, California ranks 1st in the nation for science, engineering and health doctorate recipients. Visit California's science and engineering state profile to learn more!

42.22%	of **California's** higher education degrees are concentrated in S&E fields.
6.17%	of **California's** workforce are employed in S&E occupations.
9.13%	of **California's** total employment is attributable to knowledge - and technology - intensive industries.

Learn More

CHIPS & SCIENCE – The CHIPS and Science Act's investments in the U.S. National Science Foundation will help the United States remain a global leader in innovation. Implementation of this legislation will be key to ensuring that ideas, talent and prosperity are unleashed across all corners of the nation. For more information, please visit NSF's CHIPS and Science website.

RESEARCH SECURITY – NSF is committed to safeguarding the integrity and security of science and engineering while also keeping fundamental research open and collaborative. NSF seeks to address an age of new threats and challenges through close work with our partners in academia, law enforcement, intelligence and other federal agencies. By fostering transparency, disclosure and other practices that reflect the values of research integrity, NSF is helping to lead the way in ensuring taxpayer-funded research remains secure. To learn more, please visit NSF's Research Security website.

CONNECT WITH NSF – For more information on NSF's impact in your state, please contact NSF's Office of Legislative and Public Affairs at congressionalteam@nsf.gov.