



Fact Sheet

NATIONAL SCIENCE FOUNDATION

November 3, 2016

Congress established the National Science Foundation (NSF) with the National Science Foundation Act of 1950 “to promote the progress of science; to advance the national health, prosperity and welfare; to secure the national defense; and for other purposes.” NSF is vital because we support basic research and people to create knowledge that transforms the future. This type of support:

- Is a primary driver of the U.S. economy.
- Enhances the nation’s security.
- Advances knowledge to sustain global leadership.

Vision, Goals. *NSF’s Strategic Plan for 2014-2018: Investing in Science, Engineering, and Education for the Nation’s Future* states the Foundation’s vision: “A Nation that creates and exploits new concepts in science and engineering and provides global leadership in research and education.” The plan sets three strategic goals: *Transform the Frontiers of Science and Engineering, Stimulate Innovation and Address Societal Needs Through Research and Education, and Excel as a Federal Science Agency.*

Research and Education Priorities. NSF supports basic research and education in all scientific and engineering disciplines. We are the funding source for approximately 24 percent of all federally supported basic research conducted by America’s colleges and universities. NSF invests in transformational research to catalyze breakthroughs in national priorities including clean energy, robotics, nanotechnology and cybersecurity. Through support of cognitive science and neuroscience research, NSF helps lead the Administration’s Brain Research through Advancing Innovation and Neurotechnologies (BRAIN) Initiative. We also support these National Science and Technology Council (NSTC) activities: National Nanotechnology Initiative; Networking and Information Technology R&D; and the U.S. Global Change Research Program, as well as NSF-wide investment areas such as: Clean Energy Technology, Cyberinfrastructure Framework for 21st Century Science, Engineering and Education; Science, Engineering and Education for Sustainability; Secure and Trustworthy Cyberspace; Cyber-Enabled Materials, Manufacturing and Smart Systems; and Research at the Interface of Biological, Mathematical and Physical Sciences. NSF manages the U.S. Antarctic Program, which coordinates all U.S. research in Antarctica. NSF’s educational programs reflect our long-standing commitment to developing a highly capable and diverse science and engineering workforce that is prepared to drive discovery and innovation and provide global leadership in the years ahead. NSF’s STEM education investments target all educational levels and emphasize broadening participation by underrepresented groups in science and engineering.

Results. Through the merit review process, we fund the best ideas and best people in science and engineering. NSF-supported advances include: Doppler radar, the Internet, Web browsers, bar codes, magnetic resonance imaging, ink jet printers, computer-aided design systems, artificial retinas, tissue engineering and other technology-based innovations that spur economic activity and improve the quality of life of all Americans.

- In FY 2015, an estimated 350,000 people (researchers, postdoctoral fellows, trainees, teachers and students) were supported directly by NSF;
- To date, 223 Nobel Prize winners, including one of the 2016 Nobel laureates in chemistry, three in physics, and two in economics received NSF support at some point in their careers.

Research Infrastructure. NSF supports a research infrastructure that provides multi-users with advanced capabilities for measuring, observing, manipulating and experimenting across the broad science and engineering enterprise. Our portfolio, developed and managed in cooperation with U.S. and international partners, includes research vessels, astronomical observatories, particle accelerators, seismic observatories, U.S. research stations in the Antarctic, unique ecological research sites, large datasets including long-term survey data, and advanced cyberinfrastructure including cutting-edge computational and communications networking capabilities. Among NSF's recent investments:

- The research vessel (R/V) *Sikuliaq*, a 261-foot next generation, global class, ice-capable, ship, will allow researchers to work in ice-covered waters not previously accessible on a routine basis and play an essential role in our understanding of the Arctic Ocean system and how it is changing. The *Sikuliaq*--an Inupiat word meaning young sea ice--was built with the first and largest single award made by NSF using Recovery Act funds. Operated by the University of Alaska Fairbanks as part of the U.S. academic research fleet, the *Sikuliaq* will arrive in Alaskan waters in February 2015.
- The National Ecological Observatory Network (NEON) is a precedent-setting multi-disciplinary integrated research platform for regional-to-continental scale ecological research. NEON is the first research platform and the only national experimental facility specifically designed to collect consistent and standardized sensor and biological measurements across 106 sites nationwide in close to real-time.
- The Daniel K. Inouye Solar Telescope, under construction in Maui, Hawaii, will be the world's premier ground-based solar observatory when it is completed in 2019. Formerly the Advanced Technology Solar Telescope, DKIST was renamed in honor of the late Hawaii senator at a ceremony in December 2013. The state-of-the-art instrument will provide the sharpest views ever taken of the solar surface, and enable astronomers to glean new insights into solar magnetic fields and develop a deeper understanding of how our nearest star works.
- The Large Synoptic Survey Telescope (LSST) will be an 8-meter class wide-field optical telescope designed to carry out surveys of the entire sky. LSST will collect nearly 40 terabytes of multi-color imaging data every night for 10 years, produce the deepest, widest-field sky image ever, and issue alerts for moving and transient objects within 60 seconds of their discovery. Developed jointly by NSF and the Department of Energy, the facility will enable advances in our understanding of dark matter and help researchers characterize properties of dark energy. LSST surveys will result in a comprehensive data set that will be widely accessible and provide discovery opportunities for the entire research community including K-12 students and citizen scientists.

Organization. As an independent federal agency, NSF does not fall under any cabinet department. NSF's activities are guided by the 25-member National Science Board, which also serves as a policy advisory body to the President and Congress. NSF is headed by a Director who is appointed by the President and confirmed by the U.S. Senate.

NSF program activities are organized by seven directorates and two program offices: the Biological Sciences; Computer and Information Science and Engineering; Education and Human Resources; Engineering; Geosciences; Mathematical and Physical Sciences; and Social, Behavioral and Economic Sciences directorates; Office of International Science and Engineering; and Office of

Integrative Activities. Internal operations--including salaries and expenses for about 1,500 permanent staff--account for approximately 6 percent of NSF's overall budget.

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Media Contacts

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The National Science Foundation (NSF) is an independent federal agency that supports fundamental research and education across all fields of science and engineering. In fiscal year (FY) 2016, its budget is \$7.5 billion. NSF funds reach all 50 states through grants to nearly 2,000 colleges, universities and other institutions. Each year, NSF receives more than 48,000 competitive proposals for funding and makes about 12,000 new funding awards. NSF also awards about \$626 million in professional and service contracts yearly.

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