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.
Expanding the Frontiers of Science

The U.S. National Science Foundation’s Laser Interferometer Gravitational-Wave Observatory is the most sensitive gravitational wave detector ever built, with two main facilities located in Livingston, Louisiana, and Hanford, Washington. Each facility has an L-shaped vacuum chamber with two, 4 kilometer-long arms joined at right angles, and each houses an optical interferometer. A passing gravitational wave causes one arm to lengthen and the other to shrink. The Livingston facility also includes the LIGO Science Education Center, which houses interactive hands-on science exhibits and a fully equipped classroom and auditorium. Albert Einstein’s theory of relativity predicts cataclysmic processes involving extremely dense objects in the universe (that is, the collision of black holes will produce gravitational radiation). The LIGO facilities were instrumental in observing the collision of two black holes, an event detected for the first time in 2019.

STEM Education and Broadening Participation

A five-year project at Louisiana Tech University supported by NSF’s Scholarships in Science, Technology, Engineering, and Mathematics, or S-STEM, program will fund scholarships to 40 full-time students who are pursuing bachelor’s degrees in one of eight engineering disciplines: biomedical, civil, chemical, cyber, electrical, industrial, mechanical and nanosystems engineering. First-year students will receive up to four years of scholarship support. This project aims to increase retention rates of undergraduate engineering students while also decreasing debt upon graduation by pairing scholarship funds with academic and career readiness experiences. Discipline-specific faculty mentors will play a critical role in encouraging and empowering the scholars to success by leading professional development seminars as they serve as official academic advisors for the students.

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.

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.

EPSCoR

COMPETITIVE RESEARCH | Louisiana is one of 28 U.S. states or territories under NSF’s Established Program to Stimulate Competitive Research (EPSCoR). Over $9,870,000 in awards have been made to Louisiana academic institutions through EPSCoR in FY 2022. For more information, visit Louisiana’s EPSCoR state web page.

NCSES

According to the National Center for Science and Engineering Statistics (NCSES), which is housed in NSF, Louisiana ranks 13th in the nation for academic research space. Visit Louisiana’s science and engineering state profile to learn more!

- 27% of Louisiana’s higher education degrees are concentrated in S&E fields.
- 2.46% of Louisiana’s workforce are employed in S&E occupations.
- 3.57% of Louisiana’s total employment is attributable to knowledge- and technology-intensive industries.