National Science Foundation

NORTH CAROLINA

FY 2021 Fast Facts

$219,261,000
Total NSF Awards to North Carolina

$169,415,000
Invested in Fundamental Research in North Carolina

$49,846,000
Invested in STEM Education in North Carolina

$9,084,000
Invested in North Carolina startups

Top NSF-funded Academic Institutions for FY 2021

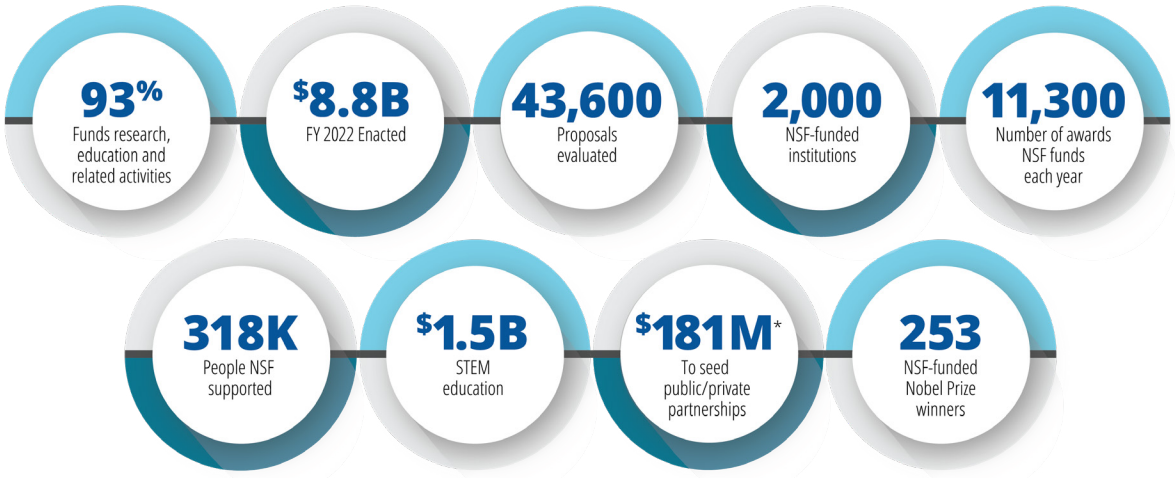
$58,056,000
North Carolina State University

$51,788,000
Duke University

$38,189,000
University of North Carolina Chapel Hill

NSF By The Numbers

The National Science Foundation (NSF) is an $8.8 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.



Data represents FY 2021 Actuals unless otherwise indicated.
**Corresponds to NSF investments initiated in FY 2021 and spanning multiple years.*

NSF-funded COVID-19 Research and Recovery

Researchers at **Duke University** are working to better understand the spread of COVID-19 as well as the type of interventions that are most likely to prevent further outbreak. Existing epidemic models rely largely on deterministic systems that are unable to quantify the uncertainty critical for decision-making. This research will result in approaches for quantifying uncertainty of possible outcomes and will provide tools to assist decision-makers in designing mitigation strategies for the COVID-19 pandemic. In particular, researchers are working to develop a new statistical inference tool to estimate the key epidemic parameters that describe the nature of the COVID-19 spread in an interpretable manner. These parameters are critical for providing reliable forecasts through real-time simulation of potential outbreaks. The results of this project will contribute to the scientific and mathematical approaches needed to provide effective and quick understanding of future epidemics or relevant phenomena.

STEM Education & Broadening Participation

The VESTEM Innovation and Collaboration (VESTMic) model at **Elizabeth City State University** will build on previous successful efforts to improve retention and academic quality of STEM majors, specifically in chemistry, computer science, mathematics and physics. The overall goals of this project are to increase the number of students pursuing STEM degrees and the quality of preparation for graduate school or entry into the STEM workforce. Implementation projects provide support to historically Black colleges and universities to design, implement, study and assess comprehensive institutional efforts to achieve these overall goals.

Research Driving Innovation

NSF's Artificial Intelligence Institute for Edge Computing Leveraging Next-generation Networks, or ATHENA, is led by **Duke University**. The institute focuses on developing edge computing with groundbreaking AI functionality while keeping complexity and costs under control. Bringing together a world-class, multidisciplinary team of scientists, engineers, statisticians, legal scholars and psychologists from seven universities, Athena will transform the design, operation and service of future systems from mobile devices to networks. It is committed to educating and developing the workforce, cultivating a diverse next generation of edge computing and network leaders whose core values are driven by ethics and fairness in AI. As a nexus point for the community, the institute will spearhead collaboration and knowledge transfer, translating emerging technical capabilities to new business models and entrepreneurial opportunities.

Infrastructure

The Research Triangle Nanotechnology Network enables innovation and commercialization of promising nanotechnologies and facilitates public education by providing access to laboratories, equipment and research expertise. The network is anchored by **North Carolina State University**, **Duke University**, and the **University of North Carolina** at Chapel Hill and is located near one of the nation's major nanoscience and nano-biotechnology regional economies.

NCSES

According to the National Center for Science and Engineering Statistics (NCSES), which is housed in NSF, North Carolina ranks **7th** in the nation for Higher education R&D performance. Visit North Carolina's science and engineering state profile to learn more!

- **5.37%** of North Carolina's workforce are employed in S&E occupations.
- **34.78%** of North Carolina's higher education degrees are concentrated in S&E fields.

Learn More

COVID RELIEF - Congress provided NSF with funding to prevent, prepare for, and respond to COVID-19 in the CARES Act of 2020 and the American Rescue Plan (ARP) Act of 2021. For more information on NSF-funded COVID-19 research and recovery, visit NSF's award database for CARES Act and ARP awards, and NSF's Toolkit for COVID funding updates.

NSF FACT SHEETS – NSF provides fact sheets about the agency and its bold investments in basic research. These fact sheets profile NSF investments in research across all fields of science and engineering, including quantum, artificial intelligence, and advanced manufacturing, and the NSF-supported research and computing infrastructure powering the U.S. response to COVID-19.

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.