



U.S. National
Science Foundation



NSF 75
YEARS OF
INNOVATION

2025 marks the 75th anniversary of NSF. Throughout the year, the agency will host in-person and virtual activities to commemorate this significant milestone. For more information, visit: [nsf.gov/75years](https://www.nsf.gov/75years)

SOUTH CAROLINA

● FAST FACTS



\$96,771,000

Total NSF Awards to South Carolina



\$85,507,000

Invested in Fundamental Research in South Carolina



\$11,264,000

Invested in STEM Education in South Carolina



\$1,374,000

Invested in South Carolina Businesses

● TOP NSF-FUNDED ACADEMIC INSTITUTIONS

Clemson University
\$35,741,000

University of South Carolina
\$25,359,000

Furman University
\$3,276,000

● NSF BY THE NUMBERS

The U.S. National Science Foundation (NSF) is an independent federal agency created by Congress in 1950 to promote the progress of science; to advance the national health, prosperity, and welfare; and to secure the national defense. To fulfill this vital role, NSF supports basic research and researchers who create knowledge that transforms the future.

DID YOU KNOW?

NSF has funded the work of **268** Nobel Prize winners over 75 years.



\$9.06B
FY 2024
Total Enacted

92%
Funds research, education and related activities



11K
Awards



1.9K
Institutions



358K
People

"Data represents FY 2024 Actuals unless otherwise indicated"



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INNOVATION | *Generating new knowledge that provides a greater understanding of the world around us*

Iron is required by nearly all forms of life due to its role as a cofactor in critical pathways, including respiration, gene regulation and DNA synthesis and repair. However, despite the cellular requirement for iron, it is still not fully understood how essential iron-dependent metabolic pathways respond to changes in iron availability. In pursuit of that goal, the **University of South Carolina** is leveraging an award from the NSF Cellular Dynamics and Function program to gain insight into how cellular iron balance and cell metabolism are coordinated in collaboration with **Benedict College**. Knowledge gained from this project will provide insight into the critical role of iron in organisms ranging from bacteria to humans by revealing how cellular iron balance and cell metabolism are coordinated.

EXPANDING FRONTIERS | *Generating institutional capacity, new technologies and societal impact*

In the field of mathematics, interactive theorem provers (ITPs) are software tools used to enhance mathematicians' conjecture formulation, proof construction and counterexample finding. These tasks are necessary not only in theoretical mathematics but also when applying complex mathematics to problems in STEM fields whose solutions may unleash vast new opportunities and economic development. However, current ITPs suffer from limitations in stability, adaptability and the depth of reasoning required to tackle complex mathematical problems. To address these limitations, **Clemson University** is using NSF funding to enhance the functionality of ITPs by integrating advanced artificial intelligence technologies with formal methods. The project will utilize the latest advancements in large language models and will be intuitive and accessible to mathematicians, guided by principles of human-centered AI and explainable AI. This approach ensures that the AI tools developed are user-friendly and can provide understandable explanations of their reasoning steps, thereby benefiting the broader scientific community and society.

EDUCATION AND WORKFORCE | *Supporting our STEM talent of today and tomorrow*

Over a five-year period, an NSF Scholarships in Science, Technology, Engineering, and Mathematics Program award to **Furman University** will fund scholarships to 27 full-time students pursuing bachelor's degrees in biology, chemistry, computer science, mathematics and/or neuroscience. The project aims to address the need for an enlarged employment pool in fields engaging artificial intelligence, Big Data, cybersecurity, data science, statistics and data analytics. Scholars engage in a diverse array of evidence-based and locally developed interventions, including an eight-day summer bridge experience, a cohort-based advising program with weekly meetings over the first two years, a third/fourth-year program focused on career readiness and job placement, and opportunities for undergraduate research and internships. Through these efforts, the project explores best practices for increasing the STEM degree completion of low-income, high-achieving undergraduates with demonstrated financial need.

COMPETITIVE RESEARCH

SOUTH CAROLINA is one of 28 U.S. states or territories under the NSF Established Program to Stimulate Competitive Research (EPSCoR). For more information, visit **SOUTH CAROLINA'S EPSCoR state web page**.

NCSES

The **National Center for Science and Engineering Statistics (NCSES)** within the U.S. National Science Foundation is the nation's leading provider of statistical data on the U.S. science and engineering enterprise. As a principal federal statistical agency, NCSES conducts nationally representative surveys and publishes objective data and reports on topics related to research and development, the science and engineering workforce, and STEM education. For example, in FY 2024, **South Carolina** invested **\$2,984,000,000** on research and development.

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

LEARN MORE

- **BROUGHT TO YOU BY NSF** – NSF has invested in discoveries, inventions, and innovations that have shaped the modern world, including the internet, 3D printing, American Sign Language, Magnetic Resonance Imaging (MRI), deep sea exploration, Doppler radar and more. For more information on NSF impacts, please visit: [nsf.gov/impacts](https://www.nsf.gov/impacts).
- **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](https://www.nsf.gov/research-security).
- **FOSTERING INNOVATION** – Every year, NSF funds around 400 companies across nearly all technology areas to create prototypes and commercialize technologies. Learn more at [seedfund.nsf.gov](https://www.nsf.gov/seedfund).