

# SOUTH CAROLINA

#### FY 2023 Fast Facts



#### • Top NSF-funded Academic Institutions for FY 2023

Clemson University \$40,758,000

University of South Carolina \$23,292,000 College of Charleston \$2,102,000

## • NSF By The Numbers

The U. S. National Science Foundation (NSF) is an <u>\$9.06 billion</u> 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.



NSF has funded the work of **261** Nobel Prize winners over 75 years.







# **Expanding the Frontiers of Science**

The Where We Live: Local and Place Based Adaptation to Climate Change in Underserved Rural Communities project, funded by an NSF Research Infrastructure Improvement Track-2 Focused Established Program to Stimulate Competitive Research Collaboration award and led by the **University of South Carolina**, builds national research competitiveness and capacity towards proactively addressing climate change in underserved rural communities. The project's aim involves communities and landscapes experiencing drought, heat and wildfires in Idaho, Nevada and South Carolina. The goal is to build the needed capacity to achieve adaptation mapping: the ability to leverage agent-based models to determine how small adaptation actions produce community-scale resilience, a novel contribution to tackling the climate challenge. The project is advancing the understanding of how perceptions, values and knowledge promote or impede adaptation to chronic (slow) and acute (fast) climate-induced change. The project hypothesizes that the size of the gap between perceptions of change and instrumented measures of climate change is a key measure that determines adaptive capacity—the potential to take actions that minimize the negative effects of climate change and adaptation.

## **STEM Education and Broadening Participation**

The growing demand for electric vehicle technicians in the burgeoning South Carolina automotive industry has created a need for career pathways for automotive technology students and corresponding professional development for their instructors. An NSF Advanced Technological Education award to **Piedmont Technical College** develops career pathways for students and training resources for instructors, culminating in an Electric Vehicle Service and Repair certificate. Over the three-year project, 50 students will be recruited to complete credit-bearing courses that will result in an EV Service and Repair certificate enabling them to work in the ever-growing EV repair field. The project integrates classroom and virtual learning to increase and diversify the pool of EV service technicians. The flexible hybrid approach allows for personalized learning to support students with different backgrounds to achieve proficiency in a shorter time and attain certification. Additionally, this project will provide professional development for faculty and trainers addressing the augmented EV curricula and create a novel "Train the Trainer" program to ensure widespread use.



# **Regional Innovation Engines**

NSF Regional Innovation Engines (NSF Engines) Development Awards help organizations create connections and develop their local innovation ecosystem within two years to prepare a strong proposal for becoming a future NSF Engine. A Development Award led by the **University of South Carolina Beaufort** is developing the vision and plans for creating a world-class maritime cybersecurity capability for South Carolina, to subsequently be adopted across the nation's maritime transportation industry. The project aims to be at the vanguard of research, education, workforce development, outreach and product creation. Innovation efforts will include cybersecurity education, research, experimentation, investment and commercialization of products and services with national impact.

#### EPSCoR

**COMPETITIVE RESEARCH** | South Carolina is one of 28 U.S. states or territories under the <u>NSF Established Program</u> to <u>Stimulate Competitive Research (EPSCoR</u>). **\$11,871,661** in awards have been made to South Carolina academic institutions through EPSCoR in FY 2023. For more information, visit South Carolina's EPSCoR state web page.

# NCSES

According to the <u>NSF National Center for Science and</u> <u>Engineering Statistics (NCSES)</u>, which is housed in NSF, 35% of science, engineering and health doctorates conferred in South Carolina are made in life sciences. <u>Visit South Carolina's</u> <u>science and engineering state profile to learn more!</u>

- **31.85**<sup>%</sup> of South Carolina's <u>higher education degrees</u> <u>are concentrated in S&E fields.</u>
  - **3.90%** of **South Carolina's** <u>workforce is employed in</u> <u>S&E occupations.</u>
  - **7.97**<sup>\*</sup> of **South Carolina's** <u>total employment is</u> <u>attributable to knowledge - and technology -</u> <u>intensive industries.</u>

#### 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 the NSF 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 the NSF Research Security website.

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