



# NORTH CAROLINA

#### FY 2023 Fast Facts



\$222,988,000

**Total NSF Awards** to North Carolina



\$174,263,000

**Invested in Fundamental** Research in North Carolina



\$47,524,000

**Invested in STEM Education** in North Carolina



\$9,500,000

**Invested in North** Carolina Businesses

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

**North Carolina State** University \$65,543,000

**Duke University** \$49,645,000 **University of North Carolina** at Chapel Hill \$40,237,000

## NSF By The Numbers

The U. S. National Science Foundation (NSF) is an \$9.06 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.



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



\$9.06B

**Total Enacted** 

93%

Funds research, education and related activities









\*Data represents FY 2023 Actuals unless otherwise indicated











## **Expanding the Frontiers of Science**

Quantum information science and engineering (QISE) is an active area of research and development with significant potential to push the fundamental performance limits for computation, networking and sensing. The NSF Historically Black Colleges and Universities-Undergraduate Program award establishes integrated QISE research and education activities at Winston-Salem State University (WSSU) in close collaboration with Clemson University and the University of Rochester. The research activities aim to facilitate the discovery of new materials and functionalities for quantum computing and networking applications by establishing a quantum transduction test bed. An educational component focuses on establishing an undergraduate program in QISE with strong handson learning elements to train a highly diverse and proficient workforce. The collaborative nature of the project, combined with the core research facilities, brings WSSU faculty and students to the forefront of QISE research and trains generations of diverse QISE workforce in the Carolinas.



## **STEM Education and Broadening Participation**

The Experimental Learning for Emerging and Novel Technologies (ExLENT)-Artificial Intelligence externship project at North Carolina State University, funded through the NSF ExLENT program, provides experiential learning opportunities to people from historically underserved and underrepresented groups in the emerging technology fields of data science and artificial intelligence. North Carolina State University is partnering with Delta Air Lines Inc., Lexmark, Charity Navigator, Randstad and other industry organizations to collaborate on the design and implementation of the 40-week externship program. The externship combines live, weekly workshop sessions and real-world industry mentoring, job shadowing and working on authentic tasks with partners. Participants in the program receive both the relevant AI competencies, knowledge and skills they will need in their future careers in AI and support throughout the job search process and placement. Upon completion, the program will prepare individuals underrepresented in emerging technology careers, including women, first-generation college students, veterans, persons with disabilities and racial/ethnic minorities, to work in emerging technology fields.



## **Regional Innovation Engines**

NSF Regional Innovation Engines (NSF Engines) represent one of the single largest broad investments in place-based research and development in the nation's history, uniquely placing science and technology leadership as the central driver for regional economic competitiveness. North Carolina is home to two of the 10 inaugural NSF Engines: the NSF Engine: North Carolina Textile Innovation and Sustainability Engine, led by The Industrial Commons, which aims to advance smart textiles and wearable technology; and the NSF Engine: Piedmont Triad Regenerative Medicine Engine, led by the Wake Forest University School of Medicine, which aims to provide the resources necessary to accelerate the transition of use-inspired regenerative medicine technologies into commercial products.

#### NCSES

According to the NSF 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!

35.23% of North Carolina's higher education degrees are concentrated in S&E fields.

of North Carolina's workforce is employed in **S&E** occupations.

7.66%

of North Carolina's total employment is attributable to knowledge - and technology intensive industries.

#### **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 congressionalteam@nsf.gov.