

VIRGINIA

• FY 2023 Fast Facts



• Top NSF-funded Academic Institutions for FY 2023

Virginia Polytechnic Institute and State University \$59,963,000

University of Virginia \$32,748,000

George Mason University \$25,985,000

• 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.

DID YOU

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







Expanding the Frontiers of Science

With an NSF Accelerating Research Translation award, **George Mason University**, in collaboration with the Center for Climate Strategies, is creating university-wide programming that enables the rapid, low-cost translation of the science that local governments, community-based organizations and local businesses need to support the development of sustainable, equitable and climate-resilient communities. Climate-related disasters are increasing in frequency and intensity and cost the U.S. billions of dollars in damages each year. This award (1) accelerates the translation of research into practice to create climate-ready communities throughout Virginia; (2) establishes and fosters a culture of translating research through community engagement, technical assistance and the co-production of research-informed products; and 3) creates a climate-ready workforce of scholars, practitioners and leaders with the skills and expertise needed to put research on climate change into practice. The first two seed translation research projects will focus on the co-production of solutions that mitigate flood hazards and reduce the impacts of urban heat on frontline communities.



The Historically Black Colleges and Universities STEM Undergraduate Success Research Center is a collaborative research effort led by faculty from Morehouse College, Spelman College and **Virginia State University**. This NSF Broadening Participation research center, seeks to increase the number of African American and underrepresented minority students in science, technology, engineering and mathematics and math teachers' pipelines by broadening participation research and providing high-impact practices as math tutors for those majoring in STEM and education disciplines. Using the Algebra Project and the Southern Initiative Algebra Project (SIAP) pedagogies, in-service math teachers, pre-service teachers and STEM college students will implement SIAP's PK-16 Model in several K-12 public school districts in three regions of the United States. The project uses mixed methods (e.g., focus groups, interviews, surveys, type and levels of support, academic records, standardized math scores, attendance records, etc.) to study how African American and underrepresented minority students become proficient math learners, manage biases (including racial, gender, and economic) and persist in STEM disciplines. HBCU students are engaged in high-impact tutoring practices while also participating in developmental studies, thus acting as tutors and field researchers.



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 **Virginia Biotechnology Research Park Corporation** supports a robust pharmaceutical cluster development program through the creation of the Alliance for Building Better Medicine. Currently, virtually all medicines rely on overseas production for key starting materials, active pharmaceutical ingredients and finished dose formulations. The alliance is therefore furthering an advanced pharmaceutical manufacturing and research and development Engine in the distressed Richmond/Petersburg region in central Virginia by undertaking planning and capacity-building activities. The eventual innovation ecosystem will be capable of bringing significant jobs and investment to the region.

NCSES

According to the <u>NSF National Center for Science and</u> <u>Engineering Statistics (NCSES)</u>, which is housed in NSF, Virginia ranks 3rd in the nation for SBIR awards. Visit Virginia's science and engineering state profile to learn more!

- **33.80%** of Virginia's higher education degrees are concentrated in S&E fields.
 - **8.13**° of Virginia's <u>workforce is employed in S&E</u> <u>occupations.</u>
 - **7.32**[%] of Virginia'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 <u>congressionalteam@nsf.gov</u>.