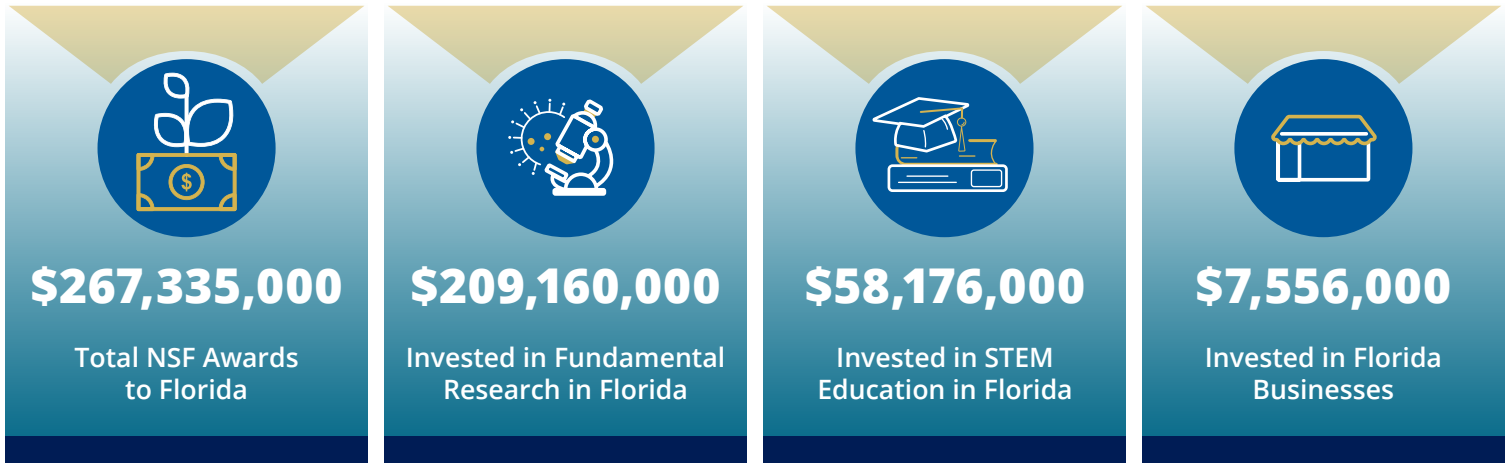


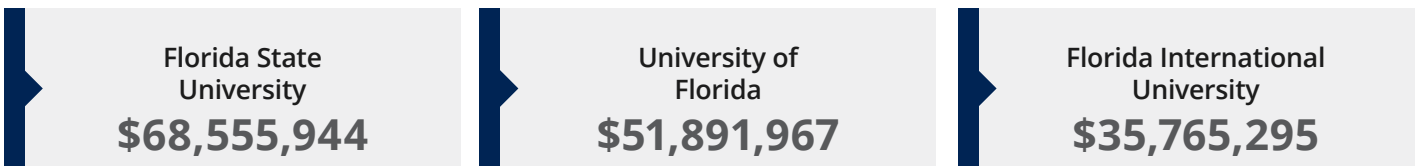


# FLORIDA

## FY 2022 Fast Facts

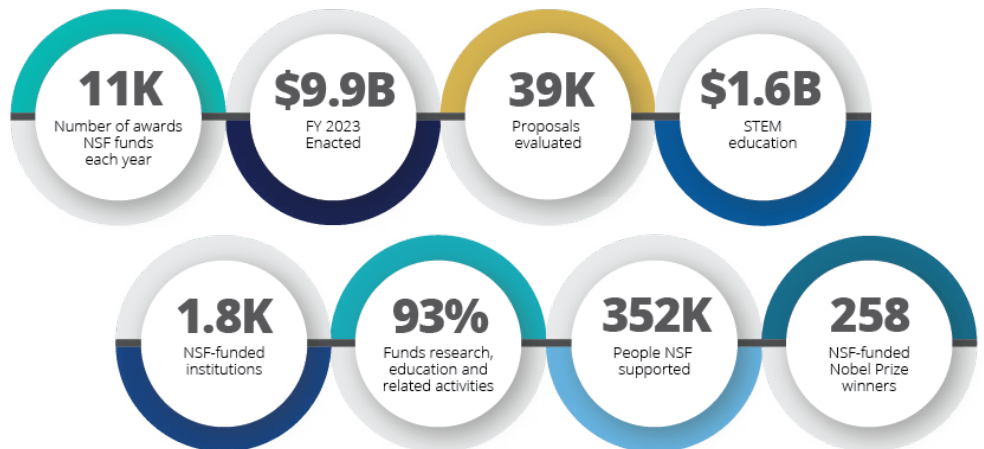


## Top NSF-funded Academic Institutions for FY 2022



## NSF By The Numbers

The National Science Foundation (NSF) is a [\\$9.5 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 2022 Actuals unless otherwise indicated.



## Expanding the Frontiers of Science

Globalization of integrated circuit, or IC, fabrication has resulted in opportunities for untrusted foundries to deliberately install backdoors, i.e., hardware Trojans, into cyber systems for an adversary to exploit at will. Reverse engineering is the only approach in the hands of defenders that has the potential to guarantee trust. However, the existing RE workflow is ad hoc, unscalable, error-prone and requires manual intervention. To assist in resolving these issues, researchers in this project led by the **University of Florida** use a tool suite called I-C-U. The I-C-U tool suite consists of technologies that develop critical algorithmic infrastructure and real-world data to advance automation in IC RE workflow while protecting critical semiconductor intellectual property. The I-C-U tool suite also introduces measures to prevent the theft of intellectual property through misuse of RE and further enhances the capabilities of defenders by verifying the authenticity of their IC's design more efficiently. Finally, I-C-U focuses on disseminating this knowledge through educational programs and transferring key RE-assisted hardware assurance technologies to the industry. These developments enable security and trust in the manufactured IC while simultaneously enabling the utilization of a competitive global supply chain.



## STEM Education and Broadening Participation

With support from NSF's Centers of Research Excellence in Science and Technology and Historically Black Colleges and Universities Research Infrastructure for Science and Engineering program, **Florida A&M University** aims to integrate research and education in the chemistry and engineering of multifunctional materials to educate the next generation of STEM scientists and prepare them for careers in this emerging field. This project will produce novel devices and structures for a number of industries and federal agencies, and at the same time increase student engagement at both the undergraduate and graduate level. The project leverages previous investments, as well as existing collaborations with Dow Chemical Company and Air Force Research Labs, to bring together scientists from multiple departments to enhance Florida A&M University's world-class research capabilities and increase minority participation in STEM. In addition to recruiting students nationally, the university will recruit students from Tallahassee Community College and Hillsborough Community College providing a model for community college-university collaborations for the early engagement of community college students in cutting-edge research at universities and their successful and timely graduation. It is expected that the proposed work will increase the research productivity of Florida A&M University's faculty, provide a more sustainable research infrastructure, and provide a model for student engagement, success, and graduation in STEM fields.



## Regional Innovation Engines

The NSF Engines program envisions fostering flourishing regional innovation ecosystems across the country, providing a unique opportunity to spur economic growth in regions that have not fully participated in the technology boom of the past few decades. The NSF Engines program uniquely harnesses the nation's science and technology research and development enterprise and regional-level resources. NSF Engines can catalyze robust partnerships rooted in scientific and technological innovation to positively impact the economy within a geographic region, address societal challenges, and advance national competitiveness. [Find potential NSF engines in your state.](#)

### Infrastructure

NSF funding supports the **National High Magnetic Field Laboratory**, MagLab, the largest and highest-powered magnet laboratory in the world. MagLab provides access to a range of powerful instruments, including a magnet that can repeatedly produce a magnetic field 2 million times stronger than the Earth's.

### NCSES

According to the [National Center for Science and Engineering Statistics \(NCSES\)](#), which is housed in NSF, Florida ranks 7th in the nation for science, engineering and health doctorate recipients. Visit Florida's science and engineering state profile to learn more!

**32.07%** of Florida's [higher education degrees are concentrated in S&E fields.](#)

**3.84%** of Florida's [workforce are employed in S&E occupations.](#)

**4.20%** of Florida'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 NSF's 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 NSF's Research Security website.](#)

**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](mailto:congressionalteam@nsf.gov).