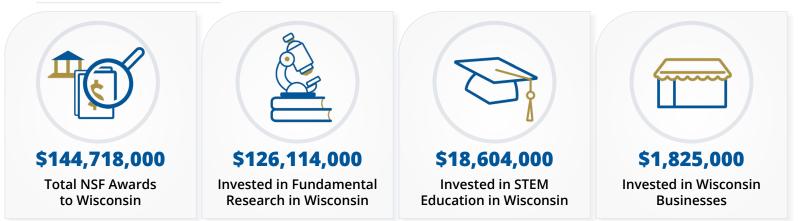


WISCONSIN

FY 2023 Fast Facts



• Top NSF-funded Academic Institutions for FY 2023



University of Wisconsin-Milwaukee \$6,260,000

Marquette University \$4,354,000

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







Expanding the Frontiers of Science

One of the long-thought applications of quantum computers is to simulate quantum systems, such as molecules and materials, at the atomic level. A research team at **Marquette University** was among the first to run molecular dynamics simulations on actual quantum hardware, trying to harness the power of quantum computing for the benefit of molecular dynamics simulations. Now, through an NSF Expanding Capacity in Quantum Information Science and Engineering Track-1 award, the team is partnering with researchers at Los Alamos National Laboratory to jointly supervise undergraduate and graduate students and one teaching postdoc in research on quantum dynamics. At Marquette, the students take the introduction to quantum computing course and several other courses related to scientific computing and quantum chemistry and attend a series of quantum seminars presented by invited QISE experts. During the summer, these students are routed to Los Alamos for internships, where they attend the Quantum Computing Summer School, interact with other scientists at the Information Science and Technology Institute, and are immersed in the research environment of the national lab.



The NSF Advanced Technological Education (ATE) program supports a diverse community of grantees led primarily by educators at community and technical colleges. ATE-funded projects and centers, in collaboration with their industry and education partners, create innovative programs in the high-tech applied science, technology, engineering and mathematics fields critical to the U.S. economy and develop thousands of valuable resources, activities and events each year. ATE Central is a free online portal run by the **University of Wisconsin-Madison**, that highlights the work of ATE centers and projects. This portal was created from the needs raised by the community to help ensure that all the resources created were made available in one place and sustained over time. ATE Central is also an information and communication hub for the community, providing dynamic services and tools that support grantee work and an archiving service that helps sustain the U.S. National Science Foundation's valuable investment. The most recent award to ATE Central supports the project team in creating and delivering a new set of community-responsive solutions, tools, activities and services to support and amplify the work of ATE grantees. The project is also expanding the awareness and reach of these materials beyond ATE via efforts like the STEM Curriculum Dissemination Channel.



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. The **NSF Engine: Great Lakes Water Innovation Engine**, led by the nonprofit **Current Innovation NFP**, aims to discover, develop and deploy innovative key technologies that attract water-intensive manufacturers to the region, recover valuable energy and mineral resources from wastewater streams and foster workforce opportunities, all while maintaining environmental health. Additionally, an NSF Engines Development Award led by WiSys, the nonprofit supporting organization of the University of Wisconsin (UW) system, focuses on sustainable agriculture innovation across Wisconsin. The network will harness use-inspired research across the UW system to develop novel and emerging technologies, from animal and plant breeding and genetics to next-generation sensors and digital agriculture.

NCSES

According to the <u>NSF National Center for Science and</u> <u>Engineering Statistics (NCSES)</u>, which is housed in NSF, Wisconsin ranks 15th in the nation for higher education R&D performance. Visit Wisconsin's science and engineering state profile to learn more!

- **35.78**° of Wisconsin's <u>higher education degrees are</u> <u>concentrated in S&E fields.</u>
 - **5.01**[%] of Wisconsin's <u>workforce is employed in S&E</u> <u>occupations.</u>
 - **8.75**^w of Wisconsin'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>.