

#### FY 2023 Fast Facts



\$167,489,000

**Total NSF Awards** to Indiana



\$149,822,000

**Invested in Fundamental** Research in Indiana



\$16,966,000

**Invested in STEM Education in Indiana** 



\$2,071,000

Invested in Indiana Businesses

# Top NSF-funded Academic Institutions for FY 2023

**Purdue University** \$76,724,000

**University of Notre Dame** \$44,089,000

**Indiana University** \$41,182,000

# 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**

Unlike electronic circuits, photonic integrated circuits (PICs) use photons, rather than electrons, to transmit and process information. While photons provide higher transmission speeds and information capacity, achieving directed signal transmission, optical isolation and switching remain critical challenges with current weakly nonlinear materials. An NSF Designing Materials to Revolutionize and Engineer our Future program award to Purdue **University** is supporting research to develop a class of novel hybrid materials — consisting of two constituents at the nanoscale — which will ultimately form several key building blocks for universal, large-scale PICs. The scope of the work provides the foundation for a PIC platform that can be manufactured at scale, actualizing the benefits of photon-based circuits, which include higher speed, lower temperature sensitivity, large integration capacity and lower costs and carbon footprint, compared to typical integrated circuit devices. These advances will provide vital new capabilities in telecommunications, health care, sensing, etc., to address critical needs in the "CHIPS and Science Act of 2022" through highly efficient device concepts and manufacturing approaches.



# **STEM Education and Broadening Participation**

The Indiana Louis Stokes Alliance for Minority Participation (Indiana LSAMP), funded through the NSF LSAMP program, is comprised of six institutions - Indiana University (Lead), Purdue University Indianapolis, Indiana University Bloomington, Ball State University, Indiana University Northwest, Indiana University South Bend and Ivy Tech Community College of Indianapolis. The goal of Indiana LSAMP is to significantly increase the number and competitiveness of students from LSAMP populations — Black people and African Americans, Hispanic and Latino Americans, American Indians, Alaska Natives, Native Hawaiians and Pacific Islanders — earning science, technology, engineering and mathematics baccalaureate degrees. To achieve this goal, the institutions employ evidence-based interventions such as faculty-mentored research, peer mentoring, tutoring, professional and STEM career development, graduate education preparation and application support. Alliance mentors are drawn from a pool of 109 STEM faculty research mentors. The outcomes of Indiana LSAMP will be disseminated through reports, LSAMP networking events and professional conferences like the local annual Assessment Institute in Indianapolis, which focuses on broadening the participation of LSAMP populations in STEM.



# **Regional Innovation Engines**

U.S. National Science Foundation 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. The program seeks regional teams rooted within industry, academia, government, nonprofits, civil society and communities of practice to catalyze and foster innovation ecosystems across the U.S. to advance critical technologies, address national and societal challenges, promote economic growth and job creation, spur sustainable regional innovation and nurture diverse talent.

To stay in the loop about future funding calls and opportunities to engage, sign up for the NSF Engines newsletter.

#### NCSES

According to the NSF National Center for Science and Engineering Statistics (NCSES), which is housed in NSF, Indiana ranks 11th in the nation for science, engineering and health doctorate recipients. Visit Indiana's science and engineering state profile to learn more!

**31.16**% of Indiana's higher education degrees are concentrated in S&E fields.

of Indiana's workforce is employed in S&E occupations.

11.09%

of Indiana'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.