MINNESOTA

**FY 2021 Fast Facts**

- **$80,220,000**
  Total NSF Awards to Minnesota

- **$72,146,000**
  Invested in Fundamental Research in Minnesota

- **$8,074,000**
  Invested in STEM Education in Minnesota

- **$1,886,000**
  Invested in Minnesota startups

**Top NSF-funded Academic Institutions for FY 2021**

- **$62,863,000**
  University of Minnesota Twin-Cities

- **$2,319,000**
  University of Minnesota-Duluth

- **$1,707,000**
  University of St. Thomas

**NSF By The Numbers**

The National Science Foundation (NSF) is an **$8.8 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.

- **93%** Funds research, education and related activities
- **$8.8B** FY 2022 Enacted
- **43,600** Proposals evaluated
- **2,000** NSF-funded institutions
- **11,300** Number of awards NSF funds each year
- **318K** People NSF supported
- **$1.5B** STEM education
- **$181M** To seed public/private partnerships
- **253** NSF-funded Nobel Prize winners

Data represents FY 2021 Actuals unless otherwise indicated. Corresponds to NSF investments initiated in FY 2021 and spanning multiple years.

nsf.gov
NSF-funded COVID-19 Research and Recovery

What makes COVID-19 spread rapidly in some places, yet slowly in others? How should society lessen social distancing while limiting an increase in infections? To answer these questions, researchers at the University of Minnesota-Twin Cities seek to understand how patterns of interpersonal interaction in social contact networks affect disease spread in a population. The researchers will simulate a disease spreading through a variety of social contact networks and use machine learning to relate each network’s structure to the number and timing of new infections. By limiting structures related to increased disease, societies may be able to reopen other parts of their economies while still curbing overall disease spread. The researchers will produce an interactive web application for the public and decision-makers to visualize trade-offs between reducing disease and maintaining social cohesion.

STEM Education

To increase safety and reduce costs, autonomous technologies are rapidly growing in commercial trucking fleets and off-highway vehicles. Autonomous technologies require a variety of devices, and truck service technicians need to be trained to troubleshoot, diagnose, repair and calibrate these devices and systems. Led by the Minnesota State Transportation Center of Excellence, a consortium of public post-secondary colleges with transportation programs, this project will offer training workshops for instructors and will provide consortium members with shared access to vehicles with autonomous technologies for education and outreach purposes.

Research Driving Innovation

Advances in technology have generated new knowledge and novel structures and devices that have great potential to positively impact the world. The Midwest Nano Infrastructure Corridor, or MiNIC, led by the University of Minnesota-Twin Cities, will accelerate these advances by providing access to leading edge micro- and nanofabrication and material characterization capabilities for the research and development of both nanoscience and nanotechnology. While MiNIC will support a broad spectrum of nano R&D, it will also target researchers in two areas: development of materials and devices for quantum sensing and computing, a field with the potential to revolutionize information technology; and application of these technologies to biology and medicine. Extreme miniaturization will enable sensing approaches that will change the understanding of biology and provide the ability to create intelligent devices for use inside the human body. MiNIC will also engage underserved communities to increase participation in this rapidly growing field and will support micro and nano laboratories at smaller schools throughout the Midwest to enable the development of nanotechnology over a broad geographic area.

Infrastructure

More than 800,000 people live in Minneapolis-St. Paul. How do residents interact with the ecosystem of which they are a part? The NSF Long-Term Ecological Research site, led by researchers at the University of Minnesota-Twin Cities, is examining how turmoil, socioeconomic disparities, pollution, habitat loss and climate change interact to affect the environment.

NCSES

According to the National Center for Science and Engineering Statistics (NCSES), which is housed in NSF, Minnesota ranks 11th in the nation for Utility patents issued to state residents. Visit Minnesota’s science and engineering state profile to learn more!

- 5.71% of Minnesota’s workforce are employed in S&E occupations.
- 28.92% of Minnesota’s higher education degrees are concentrated in S&E fields.

Learn More

COVID RELIEF - Congress provided NSF with funding to prevent, prepare for, and respond to COVID-19 in the CARES Act of 2020 and the American Rescue Plan (ARP) Act of 2021. For more information on NSF-funded COVID-19 research and recovery, visit NSF's award database for CARES Act and ARP awards, and NSF’s Toolkit for COVID funding updates.

NSF FACT SHEETS – NSF provides fact sheets about the agency and its bold investments in basic research. These fact sheets profile NSF investments in research across all fields of science and engineering, including quantum, artificial intelligence, and advanced manufacturing, and the NSF-supported research and computing infrastructure powering the U.S. response to COVID-19.

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.