In Fiscal Year (FY) 2019, the National Science Foundation made $313,292,000 in awards to Pennsylvania in support of fundamental research, advanced technical education, entrepreneurial training, STEM teacher training, long-term ecological monitoring, small business development, major research instrumentation and more.

DID YOU KNOW?

IMPACT | Through long-term NSF investments, a Carnegie Mellon University research team developed and integrated the parts to create the self-driving Cadillac SRX, which has six laser sensors, six radar units, three cameras and one thermal camera. From changing lanes on the highway to driving in congested suburban traffic and navigating traffic lights, the algorithms and communications systems designed by the research team are at the forefront of autonomous driving technology.

STEM WORKFORCE DEVELOPMENT | The Penn State Center for Nanotechnology Education and Utilization is developing a Nanotechnology Professional Development Partnership to address the growing national need for a skilled nanotechnology workforce. This effort, combined with the center’s Nanotechnology Applications and Career Knowledge (NACK) Network, creates an avenue for new and more affordable training to a much larger and diverse audience. As a national center in NSF’s Advanced Technological Education program, NACK has assisted more than 300 postsecondary institutions in developing nanotechnology programs.

SUPPORTING STUDENTS | NSF made $17,980,500 in awards in FY 2019 in support of graduate students through its flagship Graduate Research Fellowship Program, which supports students pursuing master’s and doctoral degrees in STEM disciplines.

SCIENCE & ENGINEERING (S&E) INDICATORS | 4.62% of the Pennsylvania workforce is employed in S&E occupations and 8.42% of Pennsylvania’s business establishments are industries with high employment in science, engineering and technology occupations.*

MATERIALS INNOVATION | The NSF Materials Research Science and Engineering Center at the University of Pennsylvania is a national focal point for materials research and education. The center’s research works in parallel to develop ways to make glass less fragile, produce fiber networks that chemically reconfigure in response to stress and explore new ways to combine and use nanocrystals and liquid crystals. The facility is part of NSF’s Materials Research Science and Engineering Centers (MRSECs), a network located at academic institutions across the country and funded by NSF. MRSECs undertake materials research of a scope and complexity that would not be feasible under traditional funding of individual research projects and address fundamental problems in science and engineering that are important to society.