The National Science Foundation & New York

THE NATIONAL SCIENCE FOUNDATION (NSF)

is the only federal agency whose mission includes support for all fields of fundamental science and engineering.

"Scientific research is essential to the innovation that is the foundation of U.S. competitiveness and long-term economic growth. For the U.S. to remain a global leader in science and technological innovation, stable and sustained growth for science is crucial."

– Samuel L. Stanley Jr., MD
President of Stony Brook University

BY THE NUMBERS
New York in FY 2017

$485 Million: NSF funds awarded
2nd: National ranking in NSF funds
139: NSF-funded institutions
1,490: NSF grants awarded
27: NSF research centers/facilities

EXAMPLES OF NSF-FUNDED RESEARCH IN NEW YORK

- At Stony Brook University, NSF funded researchers are bridging the digital divide for the well-being of aging populations in smart and connected communities, obtaining a better understanding of the devices necessary to improve quality of life and provide mobility and access to these populations.

- Scholars at Cornell are studying the viability of Controlled Environment Agriculture (CEA), a technology that enables cities to grow vegetables themselves and reduce transportation costs and water consumption. The data they produce on CEA's potential profitability, required workforce, and use of resources will have significant value to the relevant policymakers.

- A University of Rochester researcher is working to translate previous NSF-funded discoveries to create a new, scalable, high performance cooling technology that can be commercialized to produce more energy-efficient and environmentally friendly air conditioning options to help meet market demands and societal needs.

Courtesy: www.research.gov/seeinnovation

INVESTMENT IN SCIENCE = INVESTMENT IN NEW YORK

- New York businesses attracted over $8.5 billion in venture capital investments in 2016.[1]
- There were over 52,000 graduate students in science and engineering attending New York academic institutions in 2016.[3]
- Over 58,100 doctorates in science, engineering and health were employed in New York in 2015, ranked second among U.S. states. [2]
- New York performed $22.4 billion in research and development in 2015.[1]
- New York State's higher education sector ranked second out of all U.S. states in research and development performance for 2015.[1]

[1] *Science and Engineering Indicators 2018 NSF*
[2] *Science and Engineering State Profiles 2018 NSF*
[3] *Survey of Graduate Students and Post doctorates in Science and Engineering Fall 2016 NSF*

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THE NATIONAL SCIENCE FOUNDATION (NSF) not only funds cutting-edge research at institutions across the country; NSF's education initiatives ensure the U.S. will remain a global leader in innovation for generations to come.

Since 1952, NSF has supported over 50,000 graduate students through research fellowships.

New York received **$60 million** in NSF educational funding in FY 2017.

EXAMPLES OF NSF-FUNDED EDUCATION PROGRAMS IN NEW YORK

- Researchers at the University of Buffalo have developed a program designed to help children find the mathematics in, and develop math skills from, their everyday activities—whether art, stories, puzzles or games. Studies showed that Building Blocks program led to increases in young children's math knowledge.

- Economically disadvantaged students in 18 Brooklyn schools via NSF's "Applying Mechatronics to Promote Science" (AMPS) program at the Polytechnic Institute of New York University pair with mentors and teachers to develop the robotics and hands-on science, technology, engineering and math (STEM) lessons.

- NSF-funded computer scientists and education researchers at Columbia University have developed a system that generates 3-D scenes from written sentences. The system is a useful tool to improve middle school students' understanding of literature.

Courtesy: www.research.gov/seeinnovation

"The U.S. must continue to foster a capable STEM educated workforce in order to spur new, innovative businesses and strengthen America's ability to thrive in a global economy."
–Kevin Law, President and Chief Executive Officer, Long Island Association

"For New York State to continue to be an economic leader in this next century and realize the potential of artificial and augmented intelligence, we will need to increase cross-disciplinary research, scholarly work, and entrepreneurship. SUNY students benefit from expanded exposure to emerging STEM disciplines and internships in fields that are changing our world. Funding from National Science Foundation programs advance the work of New York's researchers and provides further opportunities for our students." – Dr. Kristina M. Johnson, Chancellor, State University of New York