Strengthening American Competitiveness in Science, Technology, Engineering, and Math
NIST Mission

To promote U.S. innovation and industrial competitiveness by advancing measurement science, standards, and technology in ways that enhance economic security and improve our quality of life
NIST AT A GLANCE
Industry’s National Laboratory

- 3,400+ Federal Employees
- 2,700+ Associates
- 5 Nobel Prizes
- 2 Campuses: Gaithersburg, MD [HQ]; Boulder, CO
- 10 Collaborative Institutes
- 15 Natl Office for Manufacturing Institutes
- 51 Manufacturing Extension Partnership Centers
- Thousands Businesses Using NIST Facilities
- U.S. Baldrige Performance Excellence Program
NIST Working to Ensure U.S. Technological Leadership in the Industries of the Future

NIST will continue to expand research efforts in these five areas and work to strengthen U.S. engagement in standardization efforts:

- **Advanced Communications/5G**: Al-enabled measurement systems to support wide deployment of 5G wireless technologies, Participating and leading in 5G standards development.

- **Quantum Science**: New quantum networking grand challenge will build on NIST world-leading science, while NIST expands industry partnerships in the Quantum Economic Development Consortium.

- **Artificial Intelligence**: Leading efforts to prioritize and address key AI standards needs while developing training and testing tools for research domains from materials science to robotics.

- **Advanced Manufacturing**: Providing technical support and key infrastructure to the nation’s manufacturing industries as they strive to out-innovate global competitors.

- **Engineering Biology**: Living Systems Foundry for safe, predictable design and control of biological systems.
Building America’s scientific workforce with a focus on diversity and inclusion

“America’s diversity is a great strength. Leveraging that strength by broadening participation in the U.S. science and engineering enterprise will be crucial to fostering individual opportunity and a thriving economy.”

-National Science Board Vision 2030

NIST is seeking to expand engagement with HBCUs, HSIs and teaching focused institutions, their students, and alumni to help solve America’s most pressing scientific and technological challenges

Grow the pipeline
Build inclusivity and equity
Be more strategic
Summer Undergraduate Research Fellowship Program (SURF)

SURF benefits:

• $5500 stipend for an 11-week fellowship or $500/week
• Housing and travel subsidy; local commuting subsidy
• Invaluable connections and experience for graduate school or a career in STEM
• Seminars from world-class researchers, lab tours, Capitol Hill visits, and other one-of-a-kind opportunities throughout the summer

Connect with other STEM students from across the country in 11 weeks of hands-on research and mentoring in NIST laboratories.

Eligibility: US citizen or US permanent resident, STEM undergraduate, good academic standing, considering graduate school or career in STEM. Apply through USAJOBS.gov, typically in early December.

For more information: https://www.nist.gov/summer-undergraduate-research-fellowship-surf
Professional Research Experience Program (PREP)

Collaborative research relationship between NIST and U.S. institutions of higher education in a variety of STEM disciplines. Applicants must be affiliated with a participating university.

Stipend and other benefits depending on researcher category: undergraduates, post-bachelor’s degree, graduate students, master’s degree holders, postdocs, research faculty.

For more information: https://www.nist.gov/iaao/academic-affairs-office/nist-professional-research-experience-program-prep
Graduate Student Measurement Science and Engineering (GMSE) Fellowship Program

GMSE benefits:

- $20,000 annual stipend, tuition coverage, and summer salary at NIST
- Over 100 participating universities
- Invaluable connections and experience, links between university research groups and NIST

Graduate level internship with flexible timeframes, ranging from a single summer to an entire graduate research program. Partnership with the Graduate Fellowships for STEM Diversity (GFSD).

Eligibility: accepted at a participating GFSD-member school, in a full-time program for a graduate degree in physical sciences or related engineering fields. Typically apply starting in August: https://stemfellowships.org/applicants/

For more information: https://www.nist.gov/iaao/academic-affairs-office/nist-graduate-student-measurement-science-and-engineering-gmse
Two-year temporary appointments for outstanding scientists and engineers. Awardees chosen through a national competition administered by the National Research Council of the National Academy of Sciences.

Annual Salary of ~$72,028, plus $3k travel. Bi-annual competitive program with a limit of 120 slots per year. Awardees must be US citizens, and have held their Ph.D. less than five years at time of application. To apply: http://sites.nationalacademies.org/pga/rap/

For more information: https://www.nist.gov/iaao/academic-affairs-office/nist-nrc-postdoctoral-research-associateships-program