

COLLABORATIONS AT NIST

BY THE NUMBERS



25

NIST & Univ.
of Colorado

Boulder researchers are fellows at JILA, a joint institute for the physical sciences

250

Days per year, 24 hours per day, the NIST Center for

Neutron Research serves more than 2,000 researchers from a variety of scientific fields in industry, government and academia



50

States and Puerto Rico each have a Manufacturing Extension Partnership Center serving small and mid-size manufacturers



60,000

Square feet of advanced laboratory space with 100+ specialized tools are available to industry, academic and government researchers at NIST's Center for Nanoscale Science and Technology in Gaithersburg, Md.

To meet its mission in the face of rapidly evolving priority areas and a widening stakeholder base, NIST is increasingly partnering with academic, industrial and governmental institutions. National priorities require the united efforts of diverse participants, and NIST has the unique convening power and technical independence to bring those participants together.

How NIST Partners

- By providing industry, academic and government researchers with state-of-the-art technical equipment at its user facilities, the NIST Center for Neutron Research and the Center for Nanoscale Science and Technology.
- By collaborating with universities and other partners through trusted, long-standing relationships with the University of Colorado, University of Maryland, and more.
- By working with diverse stakeholders to develop standards frameworks that promote interoperability and measurement science in areas such as the smart grid and cybersecurity.
- By promoting interdisciplinary, multi-partner environments through the Centers of Excellence Program that allow NIST, academic and industry researchers to work together on emerging areas of basic and applied research and innovations.
- By delivering resources to small and mid-sized U.S. manufacturers through a nationwide network of Manufacturing Extension Partnership centers to help them create and retain jobs, increase profits and save time and money.

Goals

- Expand NIST's measurement science capabilities in areas of critical national need.
- Maximize NIST's impact through effective collaboration.
- Accelerate the development and deployment of standards frameworks and other essential resources for U.S. industries.
- Create a pipeline for a future technically skilled workforce.

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NIST
National Institute of
Standards and Technology
U.S. Department of Commerce

Recent Highlights

- Awarded funding for the Center for Risk-Based Community Resilience Planning, led by Colorado State University, and the Center for Statistics and Applications in Forensic Evidence, led by Iowa State University. They join the Center for Hierarchical Materials Design, led by Northwestern University.
- Established the National Advanced Spectrum and Communications Test Network through the Center for Advanced Communications, a partnership between NIST and the National Telecommunications and Information Administration.
- Launched the Synthetic Biology Standards Consortium to bring together partners from government, academia and industry to support the advancement of synthetic biology. One of the consortium members is Stanford University, with which NIST collaborates on the Joint Initiative for Metrology in Biology.
- Partnered with the National Football League, Under Armour, and GE, on Head Health Challenge III, a competition to catalyze the development of advanced materials with improved impact resistance. Five winning research teams each received \$250,000 to further develop their innovative materials and compete for the \$500,000 grand prize, which will be announced in late 2016.



Joint Institutes/Centers

JILA—CO

Institute for Bioscience and Biotechnology Research—MD

Hollings Marine Laboratory—SC

Joint Quantum Institute, Joint Center for Quantum Information and Computer Science—MD

National Cybersecurity Center of Excellence—MD

Joint Institute for Metrology in Biology—CA

Brookhaven National Laboratory-NIST partnership—NY

NIST Centers of Excellence

Center for Hierarchical Materials Design (CHiMaD)—IL

Center for Statistics and Applications in Forensic Evidence (CSAFE)—IA, PA, VA, CA

Center for Risk-Based Community Resilience Planning—CO, OK, TX, WA, AL, CA

The MEP program serves small and mid-sized manufacturers in every state and Puerto Rico.

New for FY 2017

NIST is making focused investments to sustain and improve the quality of the tools it provides to its partners and to better leverage federal research results to realize technology advances.

- The request includes an increase of \$4.8 million so that NIST can continue to provide access to neutron measurement capabilities at the NIST Center for Neutron Research (NCNR), the only U.S. neutron facility with a focus on enhancing industrial competitiveness.
- NIST also requests \$2 million to support lab-to-market technology transfer by providing a digital platform to enhance cross-agency collaborations on technology transfer and increase the public's return on federal research investments.