

# **NITRD News Brief**

We are pleased to continue NITRD's News Brief that offers insight into the activities NITRD's member agencies are conducting to achieve the Nation's priorities through the lens of the public-facing news sources. These are divided into networking and information technology topics that have been identified as of great importance for improving Americans' daily lives.

For ease of access, under NITRD's logo, the title of each section is listed as a link to that section. The titles of the articles under the section's heading are links that provide immediate access to the news article listed. We hope you find this informative and helpful in your daily activities.

Do you know someone who would like to receive NITRD's weekly news brief? They can email NITRD's IT aficionados at <u>nco@nitrd.gov</u> and voilà they will receive the news brief with the cool technology articles each week!

### HPC

#### Asgari Receives \$1M NSF Award for Optimizing High-Performance Computing

...Bahar Asgari, an assistant professor of computer science with an appointment in the University of Maryland Institute for Advanced Computer Studies, has received funding from the National Science Foundation for innovative research to optimize high-performance computing (HPC) platforms. The \$1 million, five-year award supports Asgari's efforts to improve communication overheads in HPC applications. These overheads involve "packets" of data transmitted from one node to another, a process that has become hampered by a rapid increase in data used for large-scale simulations in areas like molecular dynamics or computational fluid dynamics. Asgari's award is part of a larger grant that focuses on three key areas: a) enhancing the scalability of computing for high-performance applications via reductions in data movement; b) developing novel algorithmic and hardware designs for the broader HPC community to leverage emerging technologies combining communication and computation; and c) building an open-source software infrastructure that can be used to facilitate education in parallel computing, HPC, and computer architecture...

### Artificial Intelligence / Machine Learning

#### DHS Announces New Policies and Measures Promoting Responsible Use of Artificial Intelligence

... The Department of Homeland Security (DHS) announced new policies to ensure responsible use of artificial intelligence (AI) by the Department. The policies, developed by the DHS Artificial Intelligence Task Force (AITF), build on a commitment from the Biden-Harris Administration to manage the risk and harness the benefits of AI. The Department uses AI technologies to advance its missions, including combatting fentanyl trafficking, strengthening supply chain security, countering child sexual exploitation, and protecting critical infrastructure. These new policies establish key principles for the responsible use of AI and specify how DHS will ensure that its use of face recognition and face capture technologies is subject to extensive testing and oversight...

Homeland Security - Sep 14, 2023

#### Air Force's Al-enabled air vehicle accomplishes tactical testing

... The Air Force demonstrated artificial intelligence-enabled air combat during a successful launch of an XQ-58A Valkyrie. This flight helps develop a trained tactical autonomy algorithm from simulation through flight test on a high-performance, uncrewed air vehicle. Al algorithms, developed and trained by the Air Force Research Laboratory's Autonomous Air Combat Operations were integrated into an XQ-58A and flown in the Eglin Gulf Test & Training Range. Trained through deep reinforcement learning, the AI algorithms used neural networks to fly the live air vehicle against simulated opponents using simulated mission systems and simulated weapons... Eglin Air Force Base - Sep 20, 2023

### **Robotics / Autonomous Vehicles**

#### NSF-funded battery-free robots use origami to change shape in mid-air

...Researchers at the University of Washington have developed small robotic devices that can change how they move through the air by "snapping" into a folded position during their descent. When these "microfliers" are dropped from a drone, they use a Miura-ori origami fold to switch from tumbling and dispersing outward through the air to dropping straight to the ground. To spread out the fliers, the researchers control the timing of each device's transition using a few methods: an onboard pressure sensor (estimating altitude), an onboard timer or a Bluetooth signal. Each device has an onboard battery-free actuator, a solar power-harvesting circuit and controller to trigger these shape changes in mid-air. Microfliers also have the capacity to carry onboard sensors to survey temperature, humidity and other conditions while soaring. The current microfliers can only transition in one direction — from the tumbling state to the falling state. This switch allows researchers to control the descent of multiple microfliers at the same time, so they disperse in different directions on their way down. ... This research was funded by the National Science Foundation... College of Arts and Sciences - Sep 13, 2023

### Quantum

#### NSF invests \$72.5M to design revolutionary materials

...A \$72.5 million investment from the U.S. National Science Foundation will drive the design, discovery and development of advanced materials needed to address major societal challenges. The Designing Materials to Revolutionize and Engineer our Future (DMREF) program will fund 37 new four-year projects. The DMREF program brings together a wide range of disciplines — including materials research, engineering, mathematics, computer science, chemistry and physics — to achieve outcomes not possible in isolation. "By integrating numerous research disciplines across NSF as well as federal and industrial partnerships, this program truly revolutionizes the design, discovery and development of new materials for addressing urgent national needs," NSF Director Sethuraman Panchanathan said. "Some of these have been used to formulate highly sensitive therapeutic proteins to mitigate the primary effects of spinal cord trauma, carbon dioxide capture to address climate change, and advanced quantum materials and semiconductors for powerful computation and communication needs, to name just a few."...

National Science Foundation - Sep 18, 2023

# **Cybersecurity / Privacy**

#### Cybersecurity Framework 2.0 Expands Scope and Adds Focus on Governance

...Since 2014, the NIST Cybersecurity Framework has been used by organizations to reduce cybersecurity risks. In 2016, the Baldrige Performance Excellence Program published a companion, self-improvement tool, Baldrige Cybersecurity Excellence Builder (BCEB), to help organizations better understand the effectiveness of their cybersecurity risk management efforts and identify improvement opportunities in the context of their overall organizational performance. The self-assessment tool blended organizational assessment approaches from the Baldrige Program with the concepts and principles of the NIST Cybersecurity Framework. The NIST Cybersecurity Framework assembles and organizes standards, guidelines, and practices that are working effectively in many organizations. It also includes informative references that are common across critical infrastructure sectors. NIST has recently released a draft of the NIST Cybersecurity Framework 2.0 (CSF 2.0), noting that there was widespread agreement that changes were warranted to address current and future cybersecurity challenges and to make it easier for organizations to use the framework. The update is intended to ensure that organizations can take steps to address those challenges and apply the Cybersecurity Framework to all types of technology environments... National Institute of Standards and Technology - Sep 19, 2023

#### DHS Issues Recommendations to Harmonize Cyber Incident Reporting for Critical Infrastructure Entities

...The Department of Homeland Security (DHS) outlined a series of actionable recommendations on how the federal government can streamline and harmonize the reporting of cyber incidents to better protect the nation's critical infrastructure. These recommendations provide a clear path forward for reducing burden on critical infrastructure partners and enabling the federal government to better identify trends in malicious cyber incidents, as well as helping organizations to prevent, respond to, and recover from attacks. Key recommendations include establishing model definitions, timelines, and triggers for reportable cyber incidents; creating a model cyber incident reporting form that federal agencies can adopt; and streamlining the reporting and sharing of information about cyber incidents, including the assessment of a potential single reporting web portal. The report also notes that there are situations when incident reporting might be delayed, such as when it would pose a significant risk to critical infrastructure, national security, public safety, or an ongoing law enforcement investigation...

Homeland Security - Sep 19, 2023

### 5G, Wireless Spectrum, Networking & Communications

#### NASA-Built Greenhouse Gas Detector Moves Closer to Launch

...A state-of-the-art imaging spectrometer will measure the greenhouse gases methane and carbon dioxide from space. This science instrument will be part of an effort led by the nonprofit Carbon Mapper organization to collect data on greenhouse gas point-source emissions. Built around technologies developed for NASA airborne campaigns and space missions, the Carbon Mapper imaging spectrometer will provide targeted data on "super-emitters" – the small percentage of individual sources responsible for a significant fraction of global methane and carbon dioxide emissions. The instrument is an advanced imaging spectrometer that measures hundreds of wavelengths of light reflected by Earth's surface and absorbed by gases in the planet's atmosphere. The spectrometer arrived Sept. 12 at Planet Labs PBC, where it will be integrated over the next several months into a Tanager satellite designed by the company. The new satellite is part of a broader effort by Carbon Mapper to survey the globe for point-source emissions of methane and carbon dioxide. That effort includes using measurements provided by an instrument already in orbit: NASA's Earth Surface Mineral Dust Source Investigation, or EMIT, an imaging spectrometer developed by JPL and installed on the International Space Station.

National Aeronautics and Space Administration - Sep 14, 2023

#### Department of Defense Releases Space Policy Review and Strategy on Protection of Satellites

...The Department of Defense recently released to Congress a combined response to the Fiscal Year 2022 NDAA requirement for a Space Policy Review and the Fiscal Year 2023 NDAA requirement to make publicly available an unclassified strategy for the protection and defense of on-orbit assets. The response to Congress communicates the strategy of the Department of Defense to defend its national security interests in space from the growing scope and scale of counterspace threats... U.S. Department of Defense - Sep 14, 2023

#### Water-Watching NASA Satellite Monitors Warming Ocean off California Coast

...Warm ocean waters from the developing El Niño are shifting north along coastlines in the eastern Pacific Ocean. Along the coast of California, these warm waters are interacting with a persistent marine heat wave that recently influenced the development of Hurricane Hilary. The Surface Water and Ocean Topography (SWOT) satellite is able

to spot the movement of these warm ocean waters in unprecedented detail. A collaboration between NASA and the French space agency, CNES, SWOT is measuring the height of nearly all water on Earth's surface, providing one of the most detailed, comprehensive views yet of the planet's oceans and fresh water lakes and rivers. The SWOT science team made the measurements with the Ka-band Radar Interferometer (KaRIn) instrument. With two antennas spread 33 feet (10 meters) apart on a boom, KaRIn produces a pair of data swaths as it circles the globe, bouncing radar pulses off the water's surface to collect water-height measurements. The visualization combines data from two passes of the SWOT satellite.

National Aeronautics and Space Administration - Sep 19, 2023

#### Sandia NL and AFRL work together increasing national security with satellites that team together

...Imagine a satellite observing ships on the ocean. As it takes pictures of each ship, an algorithm decides what kind of vessel it is. But one sneaky sailor paints a pattern on the deck that confuses the satellite, so it can't decide what it's looking at. For the past six years, Sandia National Laboratories has been working on an autonomy project led by the Air Force Research Laboratory to enable a cluster of relatively small and inexpensive satellites to work together as a single, autonomous unit. A confused satellite, for example, could communicate its problem to others in the network, which could straight away point their sensors to the same spot, combine their data and make a positive identification. The ultimate idea is to scale up to constellations that might cover virtually the entire globe — and to potentially coordinate data collection even with non-space assets, like sensors on the ground or on planes. Sandia has been heavily involved in the project, developing machine learning and autonomy algorithms, radar sensors, computer models, communications protocols and flight software. They have adapted distributed software to operate on multiple satellites without conventional, land-based communications. ... Sandia National Laboratories is supporting the Air Force Research Laboratory project.

Sandia National Laboratories - Sep 14, 2023

### **Microelectronics**

#### NSF and partners invest \$45 million in the future of semiconductors

...The U.S. National Science Foundation today announced 24 research and education projects with a total investment of \$45.6 million — including funding from the "CHIPS and Science Act of 2022" — to enable rapid progress in new semiconductor technologies and manufacturing as well as workforce development. The projects are supported by the NSF Future of Semiconductors (FuSe) program. Future semiconductors and microelectronics will require a broad coalition of science and engineering talent in academic and industrial sectors to pursue holistic, "co-design" approaches that advance materials, devices, and systems integration. Co-design approaches simultaneously consider the performance, manufacturability, recyclability and environmental sustainability of such materials, devices, and systems. The FuSe program will accelerate the development of the U.S.-based workforce and knowledge that enable innovative semiconductor and microelectronics — in direct alignment with the goals of the "CHIPS and Science Act of 2022."... National Science Foundation - Sep 14, 2023

#### Duke Receives \$2 Million in to Innovate Semiconductor Tech

...The National Science Foundation today announced a new round of funding, including support from the CHIPS and Science Act, to speed creation of new semiconductor technologies and manufacturing and strengthen workforce development efforts. Two proposed projects including Duke researchers captured \$2 million of the funding; these projects will bolster the development of hardware and software for resource-savvy machine learning and sustainable manufacturing techniques. One project zeroes in on AI's inefficiencies and proposes innovative ways to trim its massive power requirements and natural resource consumption through small, specialized, local hardware that is independent from the cloud. A second project is targeting AI's data processing energy use, replacing graph processing units with processing-in-memory (PIM) systems that offer 100 times the efficiency. Developing the innovative materials and devices and co-designing circuits and systems to enable this new technology is predicted to help reinvigorate the industry and create a wealth of job opportunities...

Duke ECE - Sep 14, 2023

### Climate Change / Green Energy & IT

#### Remarks as Prepared for Delivery by NEC Director Lael Brainard at the MSCI Sustainability Institute Launch During Climate Week NYC

...We must meet the generational challenge of building a clean energy economy and reaching net zero emissions. President Biden has taken decisive action to put the United States on track to cut our emissions in half by 2030 and reach net zero by 2050. Accelerating this economic transformation will require investment across a range of sectors and all along the supply chain. It will require greater capacity to take risks on critical first-of-a-kind green technologies, policies that support revenue generation for new business models, and capital to reach the necessary commercial scale. Technological innovation will be key to success. In every period of fundamental economic transformation,

technology breakthroughs have played a pivotal role. clean energy economy will be no exception. According to the International Energy Agency, roughly half of the emissions reductions we're counting on globally to reach net zero will come from technologies that are not commercially available today... The White House - Sep 19, 2023

#### Biden-Harris Administration Releases Roadmap to Accelerate Offshore Wind Transmission and Improve Grid Resilience and Reliability

...The U.S. Department of Energy (DOE) and the U.S. Department of the Interior (DOI) released An Action Plan for Offshore Wind Transmission Development in the U.S. Atlantic Region, a set of bold actions that will catalyze offshore wind energy, strengthen the domestic supply chain, and create good-paying, union jobs. Partially funded by the Inflation Reduction Act, An Action Plan for Offshore Wind Transmission Development in the U.S. Atlantic Region, details how wind resources could efficiently be captured off the Atlantic Coast of the United States and delivered to communities as clean, reliable power. It outlines immediate actions needed to connect the first generation of Atlantic offshore wind projects to the electric grid, as well as longer-term efforts to increase transmission over the next several decades. Over the mid- to long-term, increased intra-regional coordination, shared transmission lines, and an offshore network of high-voltage direct current (HVDC) interlinks can more efficiently bring this energy onshore... Department of Energy - Sep 19, 2023

#### NSF, international partners, invest \$76.4 million in inaugural Global Centers Competition awards

...The U.S. National Science Foundation — along with partner funding agencies from Australia, Canada, and the United Kingdom — announced awards totaling \$76.4 million for the inaugural Global Centers Competition. These international, interdisciplinary collaborative research centers will apply best practices of broadening participation and community engagement to develop use-inspired research on climate change and clean energy. Both collectively and independently, the centers will support convergent interdisciplinary research collaborations focused on assessing and mitigating the impacts of climate change on society, people, and communities. Outcomes from Global Centers' activities will inform and catalyze the development of innovative solutions and technologies to address climate change... National Science Foundation - Sep 18, 2023

#### NSF funds \$5 million for Ohio State to lead new global climate center on AI for biodiversity change

...The Ohio State University will lead a new multimillion dollar international center devoted to using artificial intelligence to help understand climate impacts on biodiversity. The Al and Biodiversity Change (ABC) Global Climate Center will bring together ecologists and computer scientists from six universities in the United States and Canada, with partners in UK, Europe, and Australia, to develop new Al-enabled, data-supported approaches to study how changes in climate are impacting life – including animals, plants and insects – on Earth. \$5 million was awarded by the National Science Foundation to researchers at Ohio State as the lead institution, as well as the University of Pittsburgh and the Massachusetts Institute of Technology. The problem is that we have this huge data problem: We don't have enough data about the impacts of climate on many species, and the data we do have is messy and not aligned. And that is where AI can come to the rescue. Researchers in the project will conduct fundamental AI research and develop and use new AI-based methods and tools to analyze data from camera traps, sound recorders, images from satellites and low-flying aircraft, DNA sequences and citizen science efforts. They will develop new and extend existing ecological models to leverage that data and AI approaches. They will use AI analysis of satellite images and extend ecological models to determine how habitat changes might influence northward movement of species...

# **Digital Health**

#### Al and machine learning can successfully diagnose polycystic ovary syndrome

...A new study by the National Institutes of Health finds that artificial intelligence (AI) and machine learning (ML) can effectively detect and diagnose Polycystic Ovary Syndrome (PCOS), which is the most common hormone disorder among women. PCOS occurs when the ovaries do not work properly, and in many cases, is accompanied by elevated levels of testosterone. The disorder can cause irregular periods, acne, extra facial hair, or hair loss from the head. Women with PCOS are often at an increased risk for developing type 2 diabetes, as well as sleep, psychological, cardiovascular, and other reproductive disorders such as uterine cancer and infertility. The researchers conducted a systematic review of all peer-reviewed studies published on this topic for the past 25 years (1997-2022) that used AI/ML to detect PCOS. They screened 135 studies and included 31 in this paper. All studies were observational and assessed the use of AI/ML technologies on patient diagnosis. This work was supported by the Intramural Research Program of the NIH/National Institute of Environmental Health Sciences...

National Institutes of Health - Sep 18, 2023

#### Software Associated with Prescription Drugs: Opportunities to Enhance Safe and Effective Medication Use

...FDA has released a draft guidance, "Regulatory Considerations for Prescription Drug-Use-Related Software," to share the agency's current thinking on software that

accompanies or supplements prescription drugs. Prescription drug-use-related software is software made by or on behalf of a drug sponsor that supplements, explains, or is otherwise related to a drug. It may potentially provide insight to patients, caregivers, and health care providers. One example of prescription drug-use-related software on the market is a mobile application (app) that acts as a digital medication log (or digital diary), where patients manually record and view their medication use over time. Another type of software on the market transmits drug use data directly through a device-connected product. For instance, consider medications that provide immediate relief for a disease like asthma, where patients can have sudden attacks. This draft guidance specifically addresses how drug sponsors can describe their software in FDA-required labeling and promotional labeling...

FDA - Sep 18, 2023

#### NIH-funded computational model helps with diabetes drug design

...MIT engineers have created a computational model that predicts how the human body will respond to different versions of "glucose-responsive insulin" (GRIs). Their model is unique in that it can also compare the human response to those of lab animals used for preclinical testing of GRIs. The MIT team used the model to analyze the results of a recent GRI clinical trial that was discontinued because the drug showed little effect in humans. Their analysis found that the drug, which had worked well in animal studies, acted differently in the human body because of differences in the behavior of a sugar receptor that helps to control the drug's action. Using this model, researchers could design novel GRIs and obtain better predictions of whether a particular GRI would work in humans before launching a costly clinical trial. ... The research was funded by the National Institutes of Health...

MIT News - Sep 20, 2023

#### Northeastern receives \$17.5 million from CDC to launch infectious disease prediction center

...The Centers for Disease Control and Prevention is giving Northeastern University \$17.5 million over the next five years to head an innovation center designed to help detect and prepare the United States for the next outbreak of infectious disease, especially in rural areas. Called "EPISTORM: The Center for Advanced Epidemic Analytics and Predictive Modeling Technology. Northeastern's EPISTORM center will lead a consortium of 10 research institutions, healthcare systems and private companies that will use tools including wastewater surveillance, AI and machine learning and other predictive analytics to help the U.S. make more informed decisions during future outbreaks of infectious diseases...

Northeastern Global News - Sep 19, 2023

# **Other IT Related**

#### Statement from President Joe Biden on International Day of Democracy

...Here at home, we've demonstrated that American democracy can tackle the challenges that matter most in peoples' lives. I signed the CHIPS and Science Act, which positions U.S. workers to compete in manufacturing today and lead the industries of tomorrow. A year ago today, I hosted the first White House Summit ever to counter hate-motivated violence and foster unity. We have dedicated more resources than ever to digital and physical security training for journalists and launched a new fund with global partners to provide defense counsel to journalists facing legal threats meant to silence them — because a free press is essential to democracy. And at the second Summit for Democracy in March, we helped bring more than 100 countries together once again—catalyzing hundreds of commitments to support independent media, empower human rights activists, defend free and fair elections, advance rights-respecting technology, and counter authoritarianism. Today we recommit to this important work. Because we know there is nothing inevitable about democracy, just as generations before us stepped up to defend it, we must answer the call to preserve democracy for generations to come... The White House - Sep 15, 2023

#### UCF Part of Team Selected for NSF Regional Innovation Engines Competition

...The U.S. National Science Foundation (NSF) has selected the NeoCity-based BRIDG project as one of the 16 finalists for its inaugural Regional Innovation Engines competition. A successful NSF Engine will transform its region into a nationally renowned, self-sustaining, technology- and innovation-driven economic hub. The UCF-supported BRIDG's project is the only one in Florida selected as a finalist. BRIDG is a not-for-profit public-private partnership specializing in advanced system integration and packaging to accelerate technology commercialization. NeoCity is a 5-acre technology district in Kissimmee that will establish a hub for semiconductor reshoring, benefitting aerospace, engineering, healthcare and other industries nationally. If selected as an awardee, the funds will expand on various efforts contributing to NeoCity's development — including a digital twin project UCF is leading. Over the past year, UCF has been working on a digital replica of NeoCity's Center for NeoVation, which is a world-class sensor and research development hub for academic and commercial use...

UCF Today - Sep 14, 2023

# STEM / Workforce & IT

#### US Department of Labor announces \$12.7M in grants awarded to promote workplace safety, health training, education

...The U.S. Department of Labor announced that its Occupational Safety and Health Administration awarded approximately \$12.7 million in grants to 100 non-profit organizations across the nation to support education and training to help workers and employers recognize serious workplace hazards, employ injury prevention and understand workers' rights and employers' responsibilities under federal law. Funded through the Susan Harwood Training Grant Program, the grants are being awarded in three categories, namely Targeted Topic Training, Training and Educational Materials Development and Capacity Building grants...

#### Sandia science and technology researchers to mentor minority students

...A government-funded consortium offering science and technology learning opportunities to student minorities aims to, over time, equalize workforce demographics at national laboratories. The partnership, titled the Rio Grande Consortium for Advanced Research on Exascale Simulation, known as Grande CARES, is funded by the National Nuclear Security Administration's Minority-Serving Institute Partnership Program. The research goal is to integrate cutting-edge computational algorithms and tools for complex engineering problems. Equally important, Grande CARES will develop scientists and engineers from under-represented communities. This should create a sustainable pipeline of researchers who are well-equipped to tackle the complex problems. Once projects are selected, Grande CARES students execute the work with help from their Sandia mentors during agreed-upon timeframes, which can range from two to three months for undergraduate students to four to five years for doctoral candidates... Sandia National Laboratories - Sep 18, 2023

#### Tulane University joins national consortium to educate next generation of quantum engineers

...The Department of Energy's RENEW Initiative has awarded a \$4.8 million grant to a seven-university consortium, which includes Tulane University. The funding will train a new generation of quantum engineers in advanced computing and communications technologies. The Reaching an Advanced Computing Technologies Workforce through Education Initiatives in Quantum Information Science and Engineering (ReACT-QISE) Consortium consists of Tulane, the University of Illinois Chicago, Spelman College, Southern University and A&M College, Rensselaer Polytechnic Institute, Arizona State University and Morehouse College. ReACT-QISE institutions will work collaboratively to develop an undergraduate quantum engineering curriculum that includes key concepts in physics, computer science, theory and other essential areas. The shared resources will then be adapted by individual institutions to meet the needs of their own students and faculty, building new degree programs and research experiences... Tulane University - Sep 19, 2023

# **STEM / Workforce Resources & Opportunities**

#### R&D WORKFORCE TRAINING: FEDERAL AGENCIES' STEM INTERNSHIPS, SCHOLARSHIPS, AND TRAINING OPPORTUNITIES

...Increasing the availability of STEM opportunities is a priority in the Biden Harris Administration. To help facilitate this, the team at NITRD developed a STEM Portal that allows anyone to search for internships and other training opportunities at Federal agencies. The NITRD STEM PORTAL is a searchable database that includes a description, link, and contact information for each program listing. Government sponsored internships and training programs are competitive, but there are many Federal opportunities and the NITRD STEM Portal is here to help...

The Networking and Information Technology Research and Development (NITRD) Program - Sep 20, 2023

#### FEDERAL HIGH END COMPUTING INFORMATION PORTAL

...Networking and Information Technology Research and Development (NITRD) has a portal that provides information about U.S. Federal government high performance computing activities, including available computing resources; HEC relevant publications; fellowship and training opportunities; and technology transfer, licensing, and industry engagement opportunities. The HEC IWG (Interagency Working Group on High End Computing) agencies provide the information contained in this portal. HEC IWG agencies are involved in various Federal activities in the HEC area including R&D and providing infrastructure and application. Take a look at it! The Networking and Information Technology Research and Development (NITRD) Program - Sep 13, 2023

Note: Any mention in the text of commercial, non-profit, academic partners, or their products, or references is for information only; it does not imply endorsement or recommendation by any U.S. Government agency.

#### Innovation Through NITRD Coordination

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