



## 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 [nco@nitrd.gov](mailto:nco@nitrd.gov) and voilà they will receive the news brief with the cool technology articles each week!

### HPC

#### **Argonne's new Sunspot testbed provides on-ramp for Aurora exascale supercomputer**

...Researchers preparing scientific codes and workloads to run on the Aurora exascale supercomputer at the U.S. Department of Energy's (DOE) Argonne National Laboratory now have a new resource at their disposal. Named Sunspot, the new test and development system has the exact same architecture as Aurora. Prior to Sunspot's arrival, development teams leveraged earlier Aurora testbeds and other DOE supercomputers, including Argonne's Polaris, to carry out exascale code development. While those systems continue to be useful tools for Aurora preparations, Sunspot's identical architecture gives researchers an ideal environment to further optimize application performance for the exascale supercomputer. Sunspot is expected to serve a role even after Aurora is powered on. Like the ALCF's previous test and development systems, Sunspot can be proving ground for new users to test and optimize code performance before moving to Aurora...

Argonne National Laboratory - Apr 26, 2023

### **How to untangle a worm ball: NSF-funded biophysicists and mathematicians solve a knotty mystery with computer-generated worms**

...MIT mathematicians teamed up with biophysicists at Georgia Tech to study the California blackworms' knotty behavior to twist and curl around each other by the thousands, forming tightly wound balls over several minutes then instantly untangle, disassembling the jiggly jumble in milliseconds. Through experiments and mathematical modeling, the team has now pinned down the mechanism by which the worms tangle up and quickly unwind, which could inspire designs for fast, reversible and self-assembling materials and fibers. Vishal Patil, a postdoc at Stanford University, developed a mathematical model of the worms' behavior while a graduate student in MIT's Department of Mathematics. Patil's co-authors on the study are Jörn Dunkel, professor of mathematics at MIT and M. Saad Bhamla. Bhamla's group at Georgia Tech studies worms, insects, and other living organisms, and how their behavior can inspire the design of new devices and robotic systems. Dunkel and Patil adapted their mathematical codes on knot stability to worm tangling by first studying the behavior of a single worm. The scientists suspected that the worms tangled and untangled based on how fast they switched their looping direction. The team incorporated these new parameters of helical motion and the speed of loop switching into their existing knot model, which they then used to simulate the behavior of hundreds of computer-generated worms. When they compared their simulations with ultrasound images of actual worms taken at Georgia Tech, the group discovered the pattern of movements in both were the same. This research was supported, in part, by the National Science Foundation...

MIT News - Apr 27, 2023

## **Artificial Intelligence / Machine Learning**

### **To Track Turbulence in Tokamaks, Researchers Turn to Machine Learning**

...Understanding the turbulence in the boundary of magnetically confined plasma in a tokamak device is fundamental in fusion research. Researchers call this boundary the Last Closed Flux Surface (LCFS). Researchers use a technique called Gas-Puff Imaging (GPI) to visualize the phenomena occurring at and around the plasma boundary in both space and time. GPI produces videos that researchers can analyze to study a kind of turbulence called "blobs." Researchers use traditional data analysis approaches to evaluate blob properties. However, these methods only provide averaged characteristics of blobs, or they have custom non-standard workflows that make them difficult to use. Machine learning provides a new solution, providing blob-by-blob tracking for every frame. Machine learning technology is good at identifying and tracking objects in images, and there are many models available for this task...

Department of Energy - May 1, 2023

### **ARO/AFOSR-funded deep-learning system explores materials' interiors from the outside**

...A MIT team used deep learning to compare a large set of simulated data about materials' external force fields and the corresponding internal structure, and used that to generate a system that could make reliable predictions of the interior from the surface data. The question: Can we develop an AI algorithm that could look at what's going on at the surface, which we can easily see either using a microscope or taking a photo, or maybe just measuring things on the surface of the material, and then trying to figure out what's actually going on inside? The technique researchers developed involved training an AI model using vast amounts of data about surface measurements and the interior properties associated with them. This included not only uniform materials but also ones with different materials in combination. The training data included imagery of the surfaces, but also various other kinds of measurements of surface properties, including stresses, and electric and magnetic fields. In many cases the researchers used simulated data based on an understanding of the underlying structure of a given material. And even when a new material has many unknown characteristics, the method can still generate an approximation that's good enough to provide guidance to engineers with a general direction as to how to pursue further measurements. This method is being made freely available for anyone to use through the website GitHub, to be mostly applied in laboratory settings, for example in testing materials used for soft robotics applications. The research was supported by the U.S. Army Research Office and the Air Force Office of Scientific Research...

MIT News - Apr 28, 2023

### **Associate professor seeks to better understand the wood trees produce with DOE and NSF-funded research**

...Before computers, most analysis of wood was done with a microscope or by measuring the density of "whole" samples. Wood density is pretty easy to measure, and we now have off-the-shelf equipment that measures density at high resolutions across tree rings. Other wood properties are much more challenging to measure and can require very expensive equipment. A major thread through Joe Dahlen's work at the University of Georgia is creating models that identify quality issues before trees are cut and transported to a mill. An emerging goal is to link his work to carbon sequestered in products and in standing trees. Dahlen is wrapping up a project with the U.S. Forest Service looking at the wood characteristics of naturally regenerated and planted longleaf pine over a variety of sites. A project with the Department of Energy is advancing the use of machine learning and highly detailed spectral imaging. Dahlen is also starting two projects with the National Science Foundation's Center for Advanced Forestry Systems looking at silvicultural treatment effects on lumber quality and methods of measuring wood density on trees before they are cut. As his lab has started to generate more and more data, he is turning to artificial intelligence and machine and deep learning to help analyze and better understand the data. By exploring different analysis methods, it allows them to record properties not visible to the naked eye, and computer programs allow them to process more data...

University of Georgia - Apr 28, 2023

### **NSF-funded grant to study human-centered AI for news recommender systems**

...A University of Minnesota-led team is leading a new \$2 million National Science Foundation (NSF) project aimed at developing a system to help researchers better study AI-powered news recommender systems. The shared research infrastructure provides artificial intelligence to researchers and students across the nation with access to transformative resources including high-quality data on human-machine interactions in the context of collaborative teams, automated driving and news recommendation. The project aims to develop a shared news recommender system that will enable researchers nationwide to carry out live, one-time and longitudinal experiments on users of AI systems that personalize the news-reading experience. The team of accomplished experimental researchers have extensive experience both in AI recommender systems and with human-centered research — including issues of research ethics, privacy and consent. "A critical element to the success of the AI research revolution is ensuring that researchers have access to the data and platforms required to continue to drive innovation and scalability in AI technologies and systems," said NSF Director Sethuraman Panchanathan. "This infrastructure must be accessible to a full breadth and diversity of talent interested in AI research and development, as that is the driving force behind modern discoveries."...

University of Minnesota Twin Cities - Apr 26, 2023

## **Robotics / Autonomous Vehicles**

### **NOAA & BOEM Send in the Drones to Chart Largely Unexplored Areas in Alaska's Aleutian Islands**

...Saildrone's fleet of uncrewed surface vehicles are navigated from point to point using modern GPS systems, always monitored by a remote pilot who can instantly take over the controls to better serve the mission or protect vessel safety. Powered partly by solar panels, its hull is protected by a stainless steel and carbon fiber design impervious to wind and waves. And its wing acts like a sail to help propel it through even the roughest seas. National Oceanic and Atmospheric Administration (NOAA) and Bureau of Ocean Energy Management (BOEM) partnered to launch Saildrone Surveyor on a 2,000-mile trip from Alameda, California, to Dutch Harbor, Alaska in the Aleutian Islands chain. From the operational base of Dutch Harbor, Saildrone Surveyor explored the nearby waters to gather data on one of the least-mapped regions in the world. Saildrone Surveyor studied the waters and seafloor around the Islands of Four Mountains and the coasts of Seguam, Atka, and Herbert Islands and was able to gather data efficiently and quickly in all of these largely unexplored areas. Saildrone Surveyor successfully navigated winds up to 35 knots, braved swells nearly two stories in height, and even dodged Typhoon Merbok, which ferociously charged it before the remote vessel was diverted to safely study a secondary location. Saildrone Surveyor's high-resolution mapping sonars provided unprecedented, detailed views of the seafloor, with preliminary indications suggesting potential presence of hydrothermal vents in the region. This summer, NOAA will send the exploratory vessel Okeanos Explorer into Alaskan waters to continue filling additional gaps in seafloor mapping from the ship, using its remotely operated vehicles to closely examine areas of interest identified during the Saildrone Surveyor voyage.

BOEM - Bureau of Ocean Energy Management - Apr 27, 2023

### **49th SFS unveils newest robotic companions**

...The Vision 60 is a quadrupedal urban and all environment ground robot, or robodog, and capable of maneuvering through austere environments with minimal difficulty. Ghost Robotics, the creators of the Vision 60, designed these robots to be extremely durable with the ability to operate in temperatures from -40 to 131 degrees Fahrenheit, maintain functionality while submerged in up to 1 meter of water and operate for a total of 3.15 hours nonstop. The Vision 60 will support the 49th SFS on base with reconnaissance and aid on patrols to maintain installation security and it will eventually be incorporated into future deployment training...

Air Education and Training Command - Apr 27, 2023

## **Cybersecurity / Privacy**

### **DOD Aims to Improve Network Security, Leverage New Technologies**

...The Defense Information Systems Agency and the Department of Defense Information Network are looking for ways to repurpose cutting-edge technology like artificial intelligence; development, security and operations; and zero-trust assets to protect the Defense Department's global network. The DODIN is the foundational platform for every military operation in the cyber domain. It's a fast-paced environment where persistent engagement is required. Among its tasks are increasing shared situational awareness and collaboration, enforcing cybersecurity standards, hardening networks, working with allies and partners, advancing defensive capabilities, modernizing critical systems, and optimizing operations...

U.S. Department of Defense - May 2, 2023

### **DHS S&T Forms New Startup Cohort to Strengthen Software Supply Chain Visibility Tools**

...The Department of Homeland Security (DHS) Science and Technology Directorate (S&T) announced seven awardees from the “Software Supply Chain Visibility Tools” topic call which sought innovative technologies to provide software bill of materials (SBOMs) based capabilities for stakeholders within the enterprise, system administrator, and software development communities. S&T’s Silicon Valley Innovation Program (SVIP) issued the solicitation, seeking open-source-based technical solutions to provide the transparency to form the foundation for a high-assurance software supply chain, and to enable visibility into software supply chains and new risk assessment capabilities that serve the mission needs of DHS components and programs, including the Cybersecurity and Infrastructure Security Agency (CISA). DHS is tapping into the startup community to develop technology that will shine a light on risks within supply chains and bolster the overall cybersecurity of organizations. The seven awardees will work as a cohort to develop two core software modules—a multi-format SBOM translator and a software component identifier translator—to be delivered as open-source libraries which, in turn, will be integrated with their SBOM enabled commercial products. Vulnerabilities in software are a key risk in cybersecurity, with known exploits being a primary path for bad actors to inflict a range of harms. By leveraging SBOMs as key elements of software security, we can mitigate the risk to the software supply chain and respond to new risks faster, and more efficiently...

Homeland Security - Apr 27, 2023

### **The Biden Administration Issues a National Cybersecurity Strategy**

...On March 2, the Biden-Harris administration released a National Cybersecurity Strategy (the Strategy) document outlining how the federal government plans to establish a secure, resilient cyberspace and digital ecosystem. The Strategy highlights the government’s efforts to bolster cybersecurity research, technologies, and practices through increased collaboration between public and private entities and to realign incentives to favor long-term investments. Higher education is not explicitly mentioned in the Strategy document, but there are several areas in which policies may apply to institutions, or federally funded grants and programs could be utilized or provided in partnership with higher education. One of the strategic objectives in the Strategy emphasizes the ability of agencies to enforce the cybersecurity laws and obligations that are in place for federal contractors, which could extend to contracts held by higher education institutions. The Strategy includes an objective focused on strengthening the cyber workforce. The Strategy will also build on existing efforts to develop a national cybersecurity workforce, including the National Initiative for Cybersecurity Education (NICE), the CyberCorps: Scholarship for Service program, and the National Centers of Academic Excellence in Cybersecurity program...

EDUCAUSE Review - Apr 27, 2023

### **Zhang wins NSF CAREER award to address cyber-physical security threats**

...For safety-critical, real-time cyber-physical systems, from critical energy infrastructure that provides the daily necessity to pacemaker implants that save lives, staying correct and responsive in the presence of cyberattacks is essential. Ning Zhang plans to address threats to the availability of these systems with a five-year \$521,000 CAREER Award from the National Science Foundation. He will look at three key areas: generalized system availability assurance on heterogeneous hardware platform; software availability through information flow analysis and selective recovery; and performance interference and isolation...

The Source - Washington University in St. Louis - Apr 27, 2023

### **Saxena awarded \$1.2M DoD grant to study cognitive security**

...Dr. Nitesh Saxena, at Texas A&M University, is part of a research team that was recently awarded a \$6.2 million grant from the highly competitive Department of Defense's Multidisciplinary University Research Initiative (MURI) Program. Collaborators on the project include researchers from the United States Air Force Academy and the University of Colorado Boulder. The researchers will develop defensive solutions to combat users' susceptibility to cyber-attacks through the foundations of psychology and neuroscience for their project...

Texas A&M University College of Engineering - Apr 28, 2023

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

### **Satellite Data, Applications Flowing Through SERVIR to Southeast Asia**

...More than 50 million people in Vietnam, Cambodia, Thailand, Laos, and Myanmar draw water for drinking and agriculture from the Mekong River. With customized tools that use NASA observations and data, the people who manage that water supply have been improving their decision-making. It is a prime example of the work NASA and the U.S. Agency for International Development (USAID) have been doing to make Earth data more accessible and useful in countries around the world. The work springs out of SERVIR, an initiative first launched in 2004 by NASA and USAID. Beyond the river-monitoring tools, scientists affiliated with the program also created a tool to automatically interpret atmospheric data from NASA satellites and share it through Thailand’s Pollution Control Department. Named the Mekong Air Quality Explorer, the tool includes a mobile app that

authorities use to identify sources of heavy smoke and pollution, track air flow, and help officials send out public health warnings about poor air quality...  
National Aeronautics and Space Administration - May 3, 2023

## Advanced Manufacturing

### **A Proclamation on National Small Business Week, 2023**

...Nearly half of all private sector workers in our country are employed by small businesses. These businesses also account for almost half of our Nation's gross domestic product. They create many of the goods and services Americans rely on to sustain their everyday lives. Success requires access to capital to meet payroll, pay rent, buy inventory, and grow. Small businesses need resilient supply chains so products can get out the door and arrive on time, and they need high-speed Internet to process transactions and connect with customers around the world. To create long-term benefits for our economy, I signed the Bipartisan Infrastructure Law, the CHIPS and Science Act, and the Inflation Reduction Act. Together, these new laws are creating billions of dollars in contracting opportunities for America's small businesses and investing hundreds of billions of Federal dollars to rebuild our infrastructure, bring manufacturing back to America, and launch a clean energy revolution right here in the United States. Our historic investment in semiconductors — the tiny computer chips that power everything from smartphones to cars — will create a manufacturing boom, including for small businesses throughout the semiconductor supply chain. Record funding for clean energy development means small businesses have the opportunity to build electric and other fuel cell vehicles and charging stations...

The White House - Apr 28, 2023

### **DoD Strengthens Supply Chains for Hypersonic and Strategic Systems**

...The Department of Defense's (DoD) Office of the Assistant Secretary of Defense for Industrial Base Policy (OASD(IBP)), through its Office of Manufacturing Capability Expansion and Investment Prioritization (MCEIP) Directorate, announced it has made three awards to strengthen supply chains for hypersonic and strategic systems. President Biden's Executive Order 14017 recognized the need to support and advance the development of the domestic hypersonics industrial base. MCEIP's Office of Defense Production Act Investments is responsible for making the awards by utilizing financial tools, like purchases and purchase commitments to support the expansion of the hypersonics industrial base...

U.S. Department of Defense - Apr 28, 2023

### **3D Printed Rocket Launched Using Innovative NASA Alloy**

...In March, the Relativity Space Terran 1 rocket lit up the night sky as it launched from Cape Canaveral Space Force Station in Florida. This was the first launch of a test rocket made entirely from 3D-printed parts, measuring 100 feet tall and 7.5 feet wide. A form of additive manufacturing, 3D printing is a key technology for enhancing capabilities and reducing cost. Terran 1 included nine additively manufactured engines made of an innovative copper alloy, which experienced temperatures approaching 6,000 degrees Fahrenheit. Created at NASA's Glenn Research Center in Cleveland under the agency's Game Changing Development program, this family of copper-based alloys known as Glenn Research Copper, or GRCop, are designed for use in combustion chambers of high performance rocket engines...

National Aeronautics and Space Administration - May 2, 2023

## Digital Health

### **The Vital Role of Research in Mpox Response: A Model for Other Diseases and Future Outbreaks**

...The White House Office of Science and Technology Policy (OSTP), the White House Mpox Response Team, and the Office of the Assistant Secretary of Health and the U.S. Department of Health and Human Services convened nearly 800 federal and non-federal researchers, advocates, and partners to discuss mpox (formerly known as monkeypox) research in the United States. The mpox research gathering provided an opportunity to share the latest science and discuss opportunities to fill critical knowledge gaps in order to ensure the United States and countries across the globe are prepared for future mpox outbreaks. Over the past year, accelerating mpox research generated a tremendous amount of new knowledge and information that helped guide response activities, including generating outbreak forecasts to guide federal and international decision-making. OSTP worked with federal partners to pilot the development of tools to improve mpox research visibility and this effort produced the first-ever U.S. research agenda and U.S. research inventory published in the context of an active outbreak. The mpox research gathering focused on four key topics: 1) vaccines and other prevention strategies, 2) treatment, 3) diagnostics, and 4) surveillance and population science. New artificial intelligence and other technologies have the potential to support and accelerate image-based diagnostics development...

The White House - Apr 28, 2023

### **FDA Takes Additional Steps to Advance Decentralized Clinical Trials**

...The U.S. Food and Drug Administration is taking additional steps to support the use of decentralized clinical trials (DCTs) for drugs, biologics and devices, where some or all the trial-related activities occur at locations other than traditional clinical trial sites. The agency released a new draft guidance that provides recommendations for sponsors, investigators and other stakeholders regarding the implementation of DCTs to advance medical product development and research. The new draft guidance covers recommendations on topics such as: \* conduct of remote clinical trial visits and clinical trial-related activities in a DCT; \* use of digital health technologies to remotely acquire data in a DCT...

FDA - May 2, 2023

### **DOD Investing in Wearable Technology That Could Rapidly Predict Disease**

...The Defense Innovation Unit (DIU) in partnership with the private sector, has developed a wearable device that was highly successful during the COVID-19 pandemic in identifying infections. The Defense Department is looking to expand its use to other infectious disease detection. The DIU's Rapid Assessment of Threat Exposure (RATE) project uses a powerful, predictive artificial intelligence algorithm that was trained using hospital-acquired data from monitored cases of COVID-19. The algorithm leverages biometric data from commercial grade off-the-shelf wearables. The RATE algorithm enabled early detection of infectious diseases up to 48 hours before symptoms appeared. In some cases, it predicted infections up to six days prior to onset, and included asymptomatic cases. RATE was one of the first 10 pilot programs funded through the Congressionally established Accelerate the Procurement and Fielding of Innovative Technologies initiative to fill critical capability gaps...

U.S. Department of Defense - Apr 28, 2023

### **Making Medical History: The Development of the First Oral Treatment for COVID-19**

...The Department of Energy (DOE) is championing cutting-edge science — including the science required to ensure bacteria and viruses do not control our lives. The development of Paxlovid was made possible, in part, by the U.S. Department of Energy, an oral antiviral treatment against COVID-19. Scientists prepared protein crystal samples of the SARS-CoV-2 virus and sent them to the National Laboratory. Argonne scientists set them up on equipment at the Advanced Photon Source, where an ultrabright x-ray beam was directed at the protein crystal. This diffracted the light into a detector, which created images of patterns of “spots.” Using the position and intensity of these imaged “spots,” computers created a 3-D structure of the sample, which allowed scientists to determine its structure. This understanding of the SARS-CoV-2 virus' protein structure helped Pfizer develop a drug that limits the virus' ability to further infect people...

Department of Energy - Apr 28, 2023

### **NIH-Funded Research Shows How Dormant Bacteria Return to Life**

...Inert, sleeping bacteria were first described more than 150 years ago. Researchers at Harvard Medical School have discovered a new kind of cellular sensor that allows spores to detect the presence of nutrients in their environment and quickly spring back to life. Rudner and team discovered that the nutrient sensor itself assembles into a conduit that opens the cell back up for business. In response to nutrients, the conduit, a membrane channel, opens, allowing ions to escape from the spore interior. This initiates a cascade of reactions that allow the dormant cell to shed its protective armor and resume growth. The scientists used multiple avenues to follow the twists and turns of the mystery. They deployed artificial intelligence tools to predict the structure of the intricately folded sensor complex, a structure made of five copies of the same sensor protein. They applied machine learning to identify interactions between subunits that make up the channel. They also used gene-editing techniques to induce bacteria to produce mutant sensors as a way to test how the computer-based predictions played out in living cells. ... Support for this work comes from the National Institutes of Health...

Harvard Medical School - Apr 27, 2023

## **STEM / Workforce & IT**

### **Hearing from the American People: How Are Automated Tools Being Used to Surveil, Monitor, and Manage Workers?**

...On International Workers' Day, the White House Office of Science and Technology Policy (OSTP) is announcing that it will be releasing a public request for information (RFI) to learn more about the automated tools used by employers to surveil, monitor, evaluate, and manage workers. The RFI seeks to advance our understanding of the design, deployment, prevalence, and impacts of these automated technologies. Employers are increasingly investing in technologies that monitor and track workers, and making workplace decisions based on that information. While these technologies can benefit both workers and employers in some cases, they can also create serious risks to workers, which is why the Biden-Harris Administration's Blueprint for an AI Bill of Rights underscores the importance of technology developers building in protections from design to deployment. It will also help ensure that new workplace technologies promote fair and equitable workplaces, supporting the Administration's commitment to advancing racial equity...

The White House - May 1, 2023

### **A Proclamation on Workers Memorial Day, 2023**

...A record 160 million Americans get up and go to work every day to provide for their families, build their communities, and earn a piece of the American Dream. But too many are exposed to unsafe working conditions, injured, or even killed in preventable accidents on the job. On Workers Memorial Day, we honor every American worker who has sacrificed their own life or well-being; we stand with the unions that fight for them every day; and we recommit to protecting the fundamental right to a safe and healthy workplace. My Administration has strengthened workplace safety enforcement and training, hiring hundreds of new workplace inspectors and increasing site visits by 30 percent. We have invested more than \$100 million in training farm workers to avoid injuries...

The White House - Apr 27, 2023

### **Recommendations From Germany: Innovative approaches and uncovering the latest trends in manufacturing workforce development.**

...The MEP National Network has been studying Germany's vocational educational training (VET) program, which most of us call apprenticeships, by going overseas and talking directly to German stakeholders. This is being taken one step further with our German Manufacturing 202 class. In February 2023, America Works and the American Council on Germany coordinated the second of three trips, and now we're ready to move beyond the basics of the German VET system. Upon returning, the 17 Stronger Together mission participants hosted a webinar we called "What We're Bringing Back from Germany" full of lessons for American policymakers, companies and other stakeholders. What is exciting about German educational institutions is the way they use hands-on projects to link theory with practical skills necessary for success on the plant floor. School projects develop thinking skills and practical knowledge, and students are expected to share their work with others. In Germany, apprentices are paid monthly when they attend and perform at both school and work. In addition, the standardized apprenticeship certification German students receive is recognized nationally. We recommend that American training programs seriously consider nationally recognized certifications like the National Institute for Metalworking Skills, Amazon Web Services, and the Manufacturing Skill Standards Council. MEP Centers can work with these national bodies to better align the needs of small, local manufacturers with the national curriculum's evolution...

National Institute of Standards and Technology - Apr 27, 2023

### **Department of Labor announces \$90M in grants to support delivery of training, employment services to young people for high demand careers**

...The U.S. Department of Labor today announced the award of \$90 million in grants to 68 organizations in 32 states to provide training and employment services. Ranging from \$700,000 to \$1.5 million each, the awards' announcement follows the department announcement of the availability of YouthBuild grants in November 2022. The grants will support pre-apprenticeships that will educate and train young people, from ages 16 to 24, who are neither enrolled in school nor in the labor market for jobs in high-demand industries. YouthBuild participants will divide their time between classroom instruction – where they earn their high school diploma or equivalency degree – and workplace training to prepare for postsecondary opportunities. The grants will also enable young people to train for careers in healthcare, information technology, manufacturing and logistics, culinary arts and hospitality...

U.S. Department of Labor - Apr 28, 2023

### **AACC, NSF Announce 12 Student Teams to Advance to Community College Innovation Challenge Finals**

...The American Association of Community Colleges (AACC), in partnership with the National Science Foundation (NSF), announced that it had selected 12 finalist teams to advance to the final round of the Community College Innovation Challenge (CCIC), set to take place in June 2023. Teams consist of two to four students and a faculty or administrator team mentor. Finalists attend an Innovation Boot Camp in June and interact with entrepreneurs and experts in business planning, stakeholder engagement, strategic communication, and marketplace dynamics. The Boot Camp culminates in a Student Innovation Poster Session on Capitol Hill with STEM leaders and Congressional stakeholders and a pitch presentation to determine the first, second, and third-place winning teams...

American Association of Community Colleges - Apr 26, 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 - Apr 13, 2023

## **Federal Register: Request for Information (RFI)**

### **National Semiconductor Technology Center Selection Committee: Deadline May 10**

...The Department of Commerce ("Department") seeks nominations for immediate consideration for a Selection Committee that will play an important role in the success of the national semiconductor technology center ("NSTC"), a public private-sector consortium that the Secretary of Commerce will establish under the CHIPS Act. The Department will choose the Selection Committee members from the nominations submitted in response to this FRN. Nominations for immediate consideration to serve on the Selection Committee must be received on or before 5:00 p.m. EST on May 10, 2023.

Federal Register - Apr 26, 2023

### **Request for Information: Automated Worker Surveillance and Management**

...Employers are increasingly using automated systems to monitor, manage, and evaluate their workers. These systems may allow employers to manage supply chains, improve health and safety, or make other informed business decisions. At the same time, applications of surveillance and monitoring systems can also pose risks to workers, including to their health and safety, equal employment opportunities, privacy, ability to meet critical needs, access to workplace accommodations, and exercise of workplace and labor rights, including their rights to form or join a labor union. The White House Office of Science and Technology Policy (OSTP) seeks comments from the public to better understand automated surveillance and management of workers, including its prevalence, purposes, deployment, and impacts, as well as opportunities for Federal agencies to work with employers, workers, and other stakeholders to ensure that these systems do not undermine workers' rights, opportunities, access, health, or safety. Interested persons and organizations are invited to submit comments on or before 5 p.m. ET, June 15, 2023...

regulations.gov - May 3, 2023

### **Request for Information (RFI) on Developing a Roadmap for the Directorate for Technology, Innovation, and Partnerships at the National Science Foundation**

...The National Science Foundation (NSF) requests input from the full range of institutions and organizations across all sectors—industry, academia, non-profits, government, venture capital, and others—to inform the development of a roadmap for its newly-established Technology, Innovation, and Partnerships (TIP) Directorate. Investments would be in use-inspired research, translation of research results to impact, and education, training, and development of talent in the key technology areas and societal, national, and geostrategic challenges. Interested persons or organizations are invited to submit comments on or before 11:59 p.m. (EST) on July 27, 2023...

Federal Register - Apr 28, 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**

Networking and Information Technology Research and Development National Coordination Office, Washington, DC USA

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