



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 and voilà they will receive the news brief with the cool technology articles each week!

Upcoming Conferences / Workshops / Webinars

CHIPS R&D Standards Summit: Registration Closes Sept 19

...The CHIPS R&D Standards Summit will bring together thought leaders within the semiconductor industry and academia to shape the future of semiconductor and microelectronics standards and drive innovation. The summit will have sessions that facilitate consensus building on the top priority areas within industry, ways to accelerate strategic efforts across these priority areas, and cover concepts from incubators and accelerators as practiced in the technology sector that might be adapted for use in standards development and enabling a diverse, standards-capable workforce. Participants will explore ways to improve the agility and efficiency of the standards process, ensuring its continued growth in the rapidly evolving semiconductor industry. The scope of the Summit includes the full range of standards types, including best practices, de facto, and formal standards, while spanning the semiconductor and microelectronics sector, from materials and design to fabrication, packaging, and testing and certification. Co-hosted by the CHIPS Research and Development Office the Networking and Information Technology Research and Development Program (NITRD), the National Nanotechnology Coordination Office (NNCO), and others. The CHIPS Research and Development Office's Standards Summit will be held as an in-person and virtual event on September 26 and 27, 2023, from 8:30 a.m. to 5:30 p.m. Eastern Time...
National Institute of Standards and Technology - Aug 9, 2023

HPC

System combines light and electrons to unlock faster, greener computing

...Computing is at an inflection point. Moore's Law, which predicts that the number of transistors on an electronic chip will double each year, is slowing down due to the physical limits of fitting more transistors on affordable microchips. Photonic computing is one potential remedy for the growing computational demands of machine-learning models. Instead of using transistors and wires, these systems utilize photons to perform computation operations in the analog domain. Lasers produce these small bundles of energy, which move at the speed of light like a spaceship flying at warp speed in a science fiction movie. When photonic computing cores are added to programmable accelerators like a network interface card, the resulting hardware can be plugged in to turbocharge a standard computer. MIT researchers have now harnessed the potential of photonics to accelerate modern computing - dubbed "Lightning," their photonic-electronic reconfigurable SmartNIC helps deep neural networks to complete inference tasks like image recognition and language generation in chatbots. Despite its potential, a major challenge in implementing photonic computing devices is that they are passive, meaning they lack the memory or instructions to control dataflows, unlike their electronic counterparts. ... The research was supported, in part, by the DARPA FastNICs program, the ARPA-E ENLITENED program, the DAF-MIT AI Accelerator, the United States Army Research Office through the Institute for Soldier Nanotechnologies, National Science Foundation (NSF) grants, and the NSF Center for Quantum Networks...
MIT News - Sep 11, 2023

NSF Awards LSU's Tiger Den Data Storage System to Provide 'Ease of Life'

...LSU researchers have been awarded \$500K by the National Science Foundation to build a shared data storage system to elevate the research experience. Le Yan, the principal investigator on the National Science Foundation grant, said Tiger Den will provide 1.5 petabytes of data storage for LSU faculty, staff and students. Tiger Den is a general-purpose, centrally managed storage for research data. Data-driven disciplines that will use Tiger Den include the biological and biomedical sciences, hydrological and ocean modeling, astrophysics, science and engineering related to materials, climate change and more. Tiger Den aims to centralize important research data and make them accessible and easily shareable...
Louisiana State University - Sep 7, 2023

Artificial Intelligence / Machine Learning

AI-enabled sensors support culturally responsive environmental monitoring

...Manoomin is a wild rice central to the culture and livelihoods of the Indigenous Ojibwe peoples who live in the Great Lakes area, but has dwindled due to the interconnected pressures of development, pollution and climate change. A \$5 million grant from the NSF Coastlines and People Hubs for Research and Broadening Participation program, funds researchers who are working closely with Ojibwe communities and scientific organizations to monitor ecosystems. Together, they are integrating computing into their efforts to support manoomin and the Indigenous culture. The researchers have a sensor network and the hydrology models, but the tribal elders have the stories – that historical knowledge. "Computing, unfortunately, has been traditionally disconnected from impacts and society, and that's something that we are trying to actively fix," Josiah Hester said, "I think NSF programs like Future of Work at the Human-Technology Frontier are seeking to address this, and I think sustainability and community-driven work and computing are all now so interconnected." The team has deployed a range of environmental sensors across manoomin wetlands. These sensors are computing nodes capable of taking high-quality 4K images and using advanced machine learning algorithms and edge computing technologies to get fast and accurate results about the wetlands' environment. Sensors will be complimented by a phone application designed for community scientists to easily upload information and images on the go...
National Science Foundation - Sep 7, 2023

Breaking ground in earthquake research: NSF announces two awards through the Centers for Innovation and Community Engagement in Solid Earth Geohazards

...The U.S. National Science Foundation has announced two awards through the Centers for Innovation and Community Engagement in Solid Earth Geohazards program. The Cascadia Region Earthquake Science Center (CRESCENT) and the Statewide California Earthquake Center (SCEC) will receive almost \$21 million over the next five years to advance research on Earth processes that underpin natural hazards like earthquakes and tsunamis. CRESCENT, using a system wide approach, will combine models, computing simulations, data science, artificial intelligence, laboratory experiments and field observations to investigate this subduction zone across the shoreline. By promoting a strong focus on using research towards practical applications, CRESCENT will contribute to improving the resilience of communities within the region that face very high

earthquake risks...

National Science Foundation - Sep 8, 2023

Robotics / Autonomous Vehicles

NOAA's drones fly straight into the Guinness World Records book

...Guinness World Records recognizes NOAA and Saildrone Inc. for using a specially-designed vehicle, called a saildrone, to gather the highest wind speed ever recorded by an uncrewed surface vehicle, which occurred during Hurricane Sam — a category 4 hurricane — on September 30, 2021. The 23-foot long Saildrone Explorer SD 1045 registered a record-setting wind speed of 126.4 miles per hour. While collecting this and other weather data, the bright orange wind and solar-powered robot transmitted a 28-second livestream that showed what it's like to be tossed inside 50-foot high waves and 126 mph winds. On the same page of the newly published Guinness World Records book, NOAA and the Altius-600 uncrewed aircraft system, developed by Anduril, is recognized for setting a record for the longest endurance flight inside a tropical cyclone by an uncrewed aircraft. The Altius-600 was deployed from NOAA's P-3 Hurricane Hunter aircraft into Hurricane Ian on September 28, 2022. Once the drone was deployed from the bottom of the airplane, it spread its 8-foot long wings to fly for a record 102 minutes inside the eye of category 5 Hurricane Ian...

National Oceanic and Atmospheric Administration - Sep 12, 2023

DARPA Seeks Tech Solutions to Create Autonomous Capabilities for Commercial Drones

...Commercial drone technology is advancing rapidly, providing cost-effective and robust capabilities for a variety of civil and military missions. As small aerial vehicles play increasingly important military roles on the battlefield, adversaries are developing electromagnetic countermeasures to disrupt communication links between operator and drone, forcing the vehicle to abort mission, return to its starting point, or crash. DARPA's Rapid Experimental Missionized Autonomy (REMA) program aims to enable a drone to autonomously continue its predefined mission when connection to the operator is lost. The 18-month, single-phase program is divided into two technical areas: 1) A drone-autonomy adapter interface and 2) mission-specific autonomy software that runs on the adapter...

DARPA - Sep 12, 2023

Sky's the limit: Fatemeh Afghah helps usher in a new era of drone innovation at Clemson University

... Fatemeh Afghah of Clemson University is working to make drones smarter and better able to operate independently in places where it's tricky to do so. She said drones, often called unmanned aerial vehicles (UAVs), could be a frequent sight in the sky in as little as a decade. She and her team work in the Intelligent Systems and Wireless Networking (IS-WIN) Laboratory on Clemson's main campus to answer critical questions that are helping open the skies to wider use of UAVs. Those questions include how UAVs can communicate where cell service is spotty or unavailable and how they can harness 5G without disrupting other users. Afghah and her team have tested their wildfire-monitoring abilities using a drone equipped with thermal imaging during a prescribed burn in northern Arizona, where they collected data that they are using to train computer models. Adding infrared has allowed the team to identify wildfires with 94% accuracy. Afghah has received funding from a variety of federal agencies throughout her career, including a 2019 Young Investigator Award from the Air Force Office of Scientific Research and a 2020 CAREER award from the National Science Foundation. Recent grants from the National Science Foundation and NASA are funding work into how drones can complement cellular networks in 5G and eventually 6G...

Clemson University - Sep 11, 2023

Cybersecurity / Privacy

DOD Releases 2023 Cyber Strategy Summary

...The Department of Defense (DOD) released an unclassified summary of its classified 2023 Cyber Strategy, which is the baseline document for how the Department is operationalizing the priorities of the 2022 National Security Strategy, 2022 National Defense Strategy, and the 2023 National Cybersecurity Strategy. It builds upon the 2018 DOD Cyber Strategy and will set a new strategic direction for the Department. The strategy highlights DOD's actions to invest in and ensure the defense, availability, reliability, and resilience of its cyber networks and infrastructure to support non-DOD agencies in their related roles and to protect the defense industrial base. The strategy is the fourth iteration for the Department, and the first to be informed by years of significant cyberspace operations...

U.S. Department of Defense - Sep 12, 2023

DOE Announces \$39 Million in Research Funding to Enhance Cybersecurity of Clean Distributed Energy Resources

...The U.S. Department of Energy's (DOE) Office of Cybersecurity, Energy Security, and Emergency Response (CESER) announced \$39 million of funding for nine new National Laboratory projects to advance the cybersecurity of distributed energy resources (DER). DER systems include utility-scale solar, wind, storage and other clean technologies; behind-the-meter renewables and storage systems; electric vehicle chargers; and other customer-owned devices. The National Laboratory teams aim to improve real-time DER operation data analytics using artificial intelligence (AI)/machine learning (ML) and secure cloud-based solutions for DER applications. The Labs will develop security solutions for current and emerging communication architectures for DER systems and develop innovative, real-time or off-line analysis technologies that secure DER...
Department of Energy - Sep 12, 2023

Cooperation Across DOD, Private Sector Critical Amid Emerging Cyber Threats

...Principal Deputy Chief Information Officer Leslie A. Beavers warned emerging cybersecurity challenges pose a "whole of government, almost whole of society threat." Beavers outlined several key approaches underway within DOD to combat the threat including information technology architecture and user experience modernization efforts and the transition to the zero-trust security paradigm. Once implemented, the zero-trust framework will move the DOD beyond traditional network security methods with capabilities designed to reduce exposure to cyberattacks, enable risk management and data sharing and quickly contain and remediate adversary activities. The strategy unveiled last year outlined four high-level goals for achieving the DOD's vision for a zero-trust architecture including cultural adoption, security and defense of DOD information systems, technology acceleration and zero trust enablement...
U.S. Department of Defense - Sep 7, 2023

5G, Wireless Spectrum, Networking & Communications

POWER Program Selects Teams to Design Power Beaming Relays

...DARPA is entering the first phase of the Persistent Optical Wireless Energy Relay (POWER) program, aimed at revolutionizing energy distribution through airborne wireless power transfer. Three teams -- led by RTX Corporation, Draper, and BEAM Co. -- will design and develop wireless optical power relays. The program goals include demonstrating the key components necessary for a resilient, speed-of-light energy network. To support rapid development, the optical energy relays designed in POWER's phase one will be demonstrated in pods carried by existing aircraft in the project's second phase. Additionally, power beaming will enable smaller, less expensive future aircraft since fuel storage and engine volume could be dramatically reduced. This will be explored through conceptual designs in phase one. Eventually these new, small, distributed platforms could provide cost-effective aircraft with unlimited range and endurance to support military missions. Each relay design will be evaluated based on accurate and efficient energy redirection, wavefront correction for high beam quality, and throttleable energy harvesting. In the third and final phase of the program, the relays will be demonstrated through an airborne optical pathway that aims to deliver 10 kilowatts of optical energy to a ground receiver that is 200 kilometers away from the ground source laser...
DARPA - Sep 8, 2023

USAFE-AFAFRICA demonstrates breakthrough mobile MQ-9A satellite launch, recovery package

...The U.S. Air Forces in Europe and Air Forces Africa achieved a significant technological proof of concept for the MQ-9A Reaper's Satellite Launch and Recovery Package, or SLR-P. The SLR-P offers a compact, "wallet-sized" innovation poised to launch and recover the MQ-9A at strategic theater locations situated in some of the most rugged, remote outposts in Europe. The SLR-P consists of a small, mobile container with an inventory list finely tuned to address the unique operational requirements and environmental nuances of each specific region. The container can be retrofitted with its own wheels to be towed or be carried by any means of available transportation and is designed to be highly mobile. The SLR-P's integration with satellite technology also ushers in a new era of connectivity and maintenance efficiency. This capability facilitates rapid power-up of the MQ-9A and seamless satellite link establishment, minimizing pre-mission preparations...
Dyess Air Force Base - Sep 7, 2023

Advanced Manufacturing

U-M to lead \$30 million complex-particle center

...The University of Michigan will lead an international team of scientists, engineers and educators to bring nature's efficiency and flexibility to advanced materials and additive manufacturing. The Center for Complex Particle Systems, or COMPASS, is a five-year, \$30 million center funded by the National Science Foundation. One of its major technological goals is to design materials that are more than the sum of their parts and can be rapidly translated to manufacturing using 3D printing. To do this with synthetic particles, the team will approach particle assemblies as systems that ladder up from the nanoscale through the microscale to the macroscale. Research efforts will start with

using graph theory to model the structures of particles of different shapes and then link up their functions with those structures...
University of Michigan News Service - Sep 7, 2023

Digital Health

Checking In on Hospital EHR APIs: Can Providers and Patients Access and Share Health Data via Apps?

...Clinicians and patients need to be able to access and appropriately share health data electronically. To implement the 21st Century Cures Act and help meet those needs, ONC's Health IT Certification Program adopted new requirements and standards for application programming interfaces (APIs) that support the secure exchange of patient data between electronic health records (EHRs) apps. Hospitals have made significant progress in enabling data sharing between their EHRs and apps – particularly larger facilities and those affiliated with a healthcare system. At the end of last year, more than 95% of certified Health IT developers met the requirements for standards-based APIs that went into effect in 2022. We also saw encouraging signs of hospital adoption of standards-based APIs, as the rate of non-federal acute care hospitals using Health Level Seven (HL7®) Fast Healthcare Interoperability Resources (FHIR®)-based APIs for patient access grew by 12 percentage points in just one year...
Health IT - Sep 11, 2023

Epidemiological Modeling in the Exascale Era Will Target New Diseases

...Epidemiological models are indispensable tools for predicting, understanding, and mitigating the impact of infectious diseases. In the early days of the COVID-19 pandemic, researchers at Lawrence Berkeley National Laboratory (Berkeley Lab) led a multi-institutional effort to develop an agent-based model that could effectively harness the power of cutting-edge exascale supercomputers to speed predictions of disease spread. With funding from the Department of Energy (DOE) Biopreparedness Research Virtual Environment (BRaVE) initiative's National Virtual Biotechnology Laboratory, the collaboration created ExaEpi. This novel code uses AMReX — a block-structured adaptive mesh refinement (AMR) framework developed by an Exascale Computing Project (ECP) co-design center — to exploit the computing capabilities of an entire exascale supercomputer for COVID-19 epidemiological simulations. BRaVE will award the EMERGE (ExaEpi for Elucidating Multiscale Ecosystem Complexities for Robust, Generalized Epidemiology) team another \$4 million per year over the next three years to build on their successes and enhance the capabilities of ExaEpi to target five new diseases: Influenza, Cholera, Zika, Nipah virus, and Burkholderia pseudomallei...
Berkeley Lab - Sep 7, 2023

FSIS Launches New Data Tool: Recall and Public Health Alert API

...The U.S. Department of Agriculture's Food Safety and Inspection Service (FSIS) launched a new feature on its website that enables software developers to access data on recalls and public health alerts through an application programming interface (API). This is FSIS' first public API and will transform the way the public can benefit from this critical and timely public health information. SIS issues recall communications to alert consumers of potential food safety issues related to FSIS-regulated products. The API will act as a bridge, allowing software developers to leverage FSIS recall data to create new value-driven products for consumers or incorporate them into existing digital services and mobile apps. The recall API is an example of how USDA leverages human-centered design, data, technology, and digital services to provide customers with easy-to-navigate online tools for critical programs and services...
USDA - Sep 7, 2023

NSF/NIH Funds AI Tech that Accurately Diagnoses Knee Arthritis from Medical Images

...Many people over the age of 50 develop arthritis of the knee, a painful condition that can make it difficult to do everyday activities like stand, walk or climb stairs. New research on the use of artificial intelligence to analyze medical images demonstrates the potential for improving diagnoses of knee osteoarthritis and predicting a person's risk of developing it in the future. A team led by researchers from The University of Texas at Austin's College of Natural Sciences and Dell Medical School developed an AI model that can diagnose knee osteoarthritis with clinical-grade performance, based solely on images of the knee joint from medical x-rays. ... This research was supported in part by the National Science Foundation and the National Institutes of Health...
Dell Medical School - Sep 7, 2023

NIH/NSF fund AI tool that helps optimize antibody medicines

...Antibodies fight disease by binding specific molecules called antigens on disease-causing agents — such as the spike protein on the virus that causes COVID-19. Once bound, the antibody either directly inactivates the harmful viruses or cells, or signals the body's immune cells to do so. Antibody treatments may be able to activate the immune system to fight diseases like Parkinson's, Alzheimer's and colorectal cancer, but they are less effective when they bind with themselves and other molecules that aren't markers of disease. Now, new machine-learning algorithms developed at the University of Michigan can highlight problem areas in antibodies that make them prone to binding non-target

molecules. The models are useful because they can be used on existing antibodies, brand new antibodies in development, and even antibodies that haven't been made yet. The team's models, which are trained on the experimental data they collected from clinical-stage antibodies, can identify how to change antibodies so they check all three boxes with 78% to 88% accuracy. This narrows down the number of antibody changes that chemical and biomedical engineers need to manufacture and test in the lab. The research was funded by the National Institutes of Health and the National Science Foundation...
University of Michigan News Service - Sep 11, 2023

Other IT Related

Elham Tabassi made the TIME100 AI list of the most influential people in artificial intelligence.

...Nearly five years ago, the U.S. National Institute of Standards and Technology (NIST) began building a program to advance the development of trustworthy and responsible AI systems. It was Elham Tabassi, an electrical engineer and chief of staff of the institute's IT lab, who pitched moving the conversation about the impact of AI from principles to practical policy implementation. Her suggestion proved markedly consequential. After Tabassi's team started doing research around AI security and bias, Congress mandated NIST to develop a voluntary risk-management framework for trustworthy AI systems as part of the National Defense Authorization Act (NDAA) of 2021. The Trustworthy Responsible AI program was put together by NIST in 2018–2019 after the advances in deep learning and it was launched as an open, transparent, inclusive process. NIST intentionally reached out to not only technology developers, computer scientists, mathematicians, statisticians, and engineers, but also to attorneys, psychologists, sociologists, cognitive scientists, and philosophers. One of the important contributions of the AI RMF was that it provides a structure to the conversations about AI risk and AI risk management and provides a sort of an interoperable lexicon to talk about it. Every entity needs to know their risk appetite, understand the risks involved, interpret the trade-offs and interactions among them, and come up with a solution...
Time - Sep 7, 2023

Alondra Nelson Named to TIME's Inaugural TIME100 AI List

...TIME has named Alondra Nelson, Harold F. Linder Professor in the Institute's School of Social Science, to the first-ever TIME100 AI list, which highlights 100 individuals advancing major conversations about how AI is reshaping the world. The list features leaders, policymakers, artists, and entrepreneurs across a variety of fields and from countries across the globe. Nelson is praised for having led the charge "with responding to the rapid changes in generative AI last year" in her role as the director of the White House Office of Science and Technology Policy (OSTP)...
Institute for Advanced Study - Sep 7, 2023

NSF announces 10 EPSCoR Track-4 awards to fund research fellowships at NASA facilities

...The U.S. National Science Foundation has invested over \$2.7 million in 10 projects through the Established Program to Stimulate Competitive Research (EPSCoR). This investment, in collaboration with NASA, aims to strengthen research infrastructure and advance STEM talent development at nine institutions in seven U.S. states and territories and develop the next generation of leaders in STEM. The Research Infrastructure Improvement Track-4: EPSCoR Research Fellows awards will fund principal investigators from institutions with high enrollments of students from underrepresented populations in STEM...
National Science Foundation - Sep 11, 2023

DARPA will use modeling and simulation tools to develop reduced drag on ships and undersea vehicles in turbulent conditions

...As ships, boats, and uncrewed underwater vehicles (UUVs) move through the water, they experience resistance, or drag, caused by waves and friction from water contact with the hull. With the goal of overcoming the effects of drag, DARPA announced its Drag Reducing Architected Geometries (DRAG) program. The program seeks to create optimized shapes and surface characteristics for ship and UUV hulls to reduce drag in transitional and fully turbulent flow conditions. This would enable increased speed and endurance, while reducing fuel use and emissions. The program will explore various material structures, shapes, and coatings to decrease friction where water contacts the hull. DRAG is not focused on biofouling mitigation, development of new hull materials, manufacturing scale-up, or methods that require active air and/or polymer injection. DRAG is part of DARPA's Disruptioneering effort designed to rapidly explore bold, high-risk ideas with the goal of accelerating scientific discovery. The 18-month effort comprises two phases: a nine-month first phase to develop a modeling and simulation tool to optimize surface solutions from flat plates to complex curvatures and then fabricate the optimized geometry for testing in a water tunnel...
DARPA - Sep 8, 2023

NSF announces \$120 million in funding to create 4 new Science and Technology Centers

...The U. S. National Science Foundation has announced a \$120 million investment over five-year to support four new Science and Technology Centers (STCs). Since program

inception in 1987, the STC: Integrative Partnerships program has supported exceptionally innovative, complex research and education projects that have opened up new areas of science and engineering and developed breakthrough technologies. Each awardee will receive approximately \$6 million per year over a five-year period, with the possibility of continual funding for up to five additional years. The four Science and Technology Centers include: * NSF Science and Technology Center for Quantitative Cell Biology (QCB), led by researchers from the University of Illinois Urbana-Champaign; Harvard Medical School; and the J. Craig Venter Institute. * NSF New Frontiers of Sound (NewFoS) Science and Technology Center, led by researchers from the University of Arizona; California Institute of Technology; The City University of New York; the Georgia Institute of Technology; University of Alaska Fairbanks; UCLA; University of Colorado Boulder; Wayne State University; and Spelman College. * NSF Center for Complex Particle Systems (COMPASS), led by a team of researchers from the University of Michigan; University of Illinois Urbana-Champaign; Northeastern University; University of Southern California; Wayne State University; Chicago State University; North Carolina State University; and Formative Evaluation Research Associates. * NSF Center for Braiding Indigenous Knowledges and Science (CBIKS), led by a team of researchers from the University of Massachusetts Amherst; Northern Arizona University; University of Maine; University of California, Santa Cruz; University of Washington; Montana State University; Western Washington University; Huliauapa'a; Alaska Pacific University; New York University; College of Menominee Nation; University of Michigan; Gedakina; and SUNY College of Environmental Science and Forestry...
National Science Foundation - Sep 7, 2023

STEM / Workforce & IT

Hands-On Learning Experiences Encourage Cybersecurity Career Discovery

...High schools often struggle to provide students with a clear understanding of what cybersecurity careers actually look like. Hands-on learning experiences, like those we've had at schools and during internships with NICE at NIST, can help bring cybersecurity education and career pathways into focus for young learners. With foundational cybersecurity skills and better awareness of the pathways available in cybersecurity, young learners will be more likely to consider a career in cybersecurity, even if they don't pursue it right out of high school. By building connections with local employers and leveraging their own IT staff and resources, educators and other school leaders can cultivate extracurriculars and work-based learning for students who are interested in learning about cybersecurity. This will increase the students' interest and allow them to decide if they want to take their next step in cybersecurity education or careers. Want to learn more about inspiring and promoting awareness and exploration of cybersecurity careers? Join NICE at NIST for Cybersecurity Career Week, October 16-21, 2023. Learn more and access cybersecurity career resources at nist.gov/nice/ccw...
National Institute of Standards and Technology - Sep 11, 2023

AI-Powered Education Tools Chosen for Further Development

...DARPA awarded \$750,000 to further develop solutions as part of AI Tools for Adult Learning – a competitive opportunity launched last fall that focused on helping adults learn complex topics necessary for the current and future national security workforce. AI Tools for Adult Learning asked technologists, researchers, students, teachers, and creators of digital learning platforms to propose AI tools or technologies geared toward adult learners. After the successful completion of a multi-phase review process by a diverse set of judges representing venture capitalists, philanthropists, organizational leaders, teachers, and researchers, the following solutions earned top honors for their potential to create customized learning experiences that improve the training of new skills in adults who have completed postsecondary education. DARPA's AI Tools for Adult Learning was part of the Tools Competition – one of the largest education technology competitions of its kind. Now in its third cycle, that competition has awarded \$9.5 million to 80 winners worldwide. This year is DARPA's first collaboration with the Tools Competition...
DARPA - Sep 8, 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 - Jun 21, 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

NERSC Accepting NESAP for Workflows Applications

...The National Energy Research Scientific Computing (NERSC) Center is now accepting applications from NERSC projects for the NERSC Science Acceleration Program (NESAP) for Workflows. Chosen teams will work with NERSC for one year to prepare for and better utilize advanced workflow capabilities such as hardware acceleration, reconfigurable storage, advanced scheduling, and integration with edge services, as well as alignment with the Integrated Research Infrastructure (IRI) initiative. Applications will remain open through October 2...
NERSC - Sep 11, 2023

Federal Register: Request for Information (RFI)

NIST Seeks Input on Implementation of National Standards Strategy for Critical and Emerging Technology

...The U.S. Department of Commerce's National Institute of Standards and Technology (NIST) has published a Request for Information seeking public input on how best to implement the U.S. Government National Standards Strategy for Critical and Emerging Technology. NIST is seeking information that will support the development of the most effective implementation plan for the USG NSSCET. The agency is seeking public input on the best ways to partner with relevant stakeholders, remove barriers to participation in international standards development, and enhance the U.S. government's support for an international standards system that is open, consensus-based, and led by the private sector. The RFI poses several questions in each of four broad categories: investment, participation, workforce, and integrity and inclusivity. Responses are due by 5 p.m. Eastern time on Nov. 6, 2023...
National Institute of Standards and Technology - Sep 7, 2023

Joint ITA-NIST-USPTO Collaboration Notice of Public Listening Session

...The International Trade Administration (ITA) creates prosperity by strengthening the international competitiveness of U.S. industry, promoting trade and investment, and ensuring fair trade and compliance with trade laws and agreements. The National Institute of Standards and Technology (NIST) promotes U.S. innovation and industrial competitiveness by advancing standards, and technology in ways that enhance economic security and improve our quality of life. The United States Patent and Trademark Office (USPTO) plays an important role in incentivizing and protecting innovation. ITA, NIST, and the USPTO are initiating a listening session with stakeholders focused on issues at the intersection of standards and intellectual property. The Agencies are seeking stakeholder input on the current state of U.S. firm participation in standard setting, and the ability of U.S. industry to readily adopt standards to grow and compete, especially as that relates to the standardization of critical and emerging technologies. The public listening session will be held on Wednesday, September 20, 2023, from 1 to 5 p.m. ET. Persons seeking to attend, either in person or virtually but not speak at the event, must register by September 18, 2023...
Federal Register - Sep 9, 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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