

ANNOUNCEMENTS

[Seed Funding](#)

Thank you for submitting proposals to IDIA's first round of seed funding opportunities. The reviews are complete, and we plan on contacting those who applied in two weeks. Stay tuned as we share the winning teams' information in the August newsletter.

[Smart Cities/Communities](#)

Does your research apply to smart cities/communities? Data analytics, cybersecurity, and IoT, among several other technologies, help communities tackle key challenges like transportation, public safety, advanced building design, logistics, and energy systems. To gauge interest for collaboration, exposure, and funding around smart/communities, IDIA, along with several members, has created a short [5-minute survey](#). The survey results will help us assess our capabilities, build our communities around this theme, and share opportunities when they arise.

FUNDING OPPORTUNITIES

[National Science Foundation - NSF Program on Fairness in Artificial Intelligence in Collaboration with Amazon \(FAI\)](#)

NSF has long supported transformative research in artificial intelligence (AI) and machine learning (ML). The resulting innovations offer new levels of economic opportunity and growth, safety and security, and health and wellness, intended to be shared across all segments of society. Broad societal acceptance of large-scale deployments of AI systems rely critically on their trustworthiness which, in turn, depends on the ability to assess and demonstrate the fairness (including broad accessibility and utility), transparency, explainability, impartiality, inclusivity, and accountability of such systems. For example, the behavior of algorithms for face recognition, speech, and language, especially when integrated into decision support systems applied across different segments of society, would benefit from new foundational research in fairness of AI systems. NSF and Amazon are partnering to jointly support computational research focused on fairness in AI, with the goal of contributing to trustworthy AI systems that are readily accepted and deployed to tackle grand challenges facing society. Specific topics of interest include, but are not limited to transparency, explainability, accountability, inclusivity, potential adverse biases (including social biases) and effects, mitigation strategies, algorithmic advances, fairness objectives, validation of fairness, participatory design, and advances in broad accessibility and utility. Funded projects will enable broadened acceptance of AI systems, helping the U.S. to further capitalize on the potential of AI technologies. Although Amazon provides partial funding for this program, it will not play a role in the selection of proposals for award. Advancing AI is a highly interdisciplinary endeavor drawing on fields such as computer science, information science, engineering, statistics, mathematics, cognitive science, psychology, sociology, decision science, and economics.

Deadline: August 13, 2021

[Department of State - Bureau of Economic and Business Affairs Promoting American Leadership, Values, and Economic Prosperity in Artificial Intelligence](#)

The Directorate of International Communications and Information Policy (CIP) at the Department of State announces this Notice of Funding Opportunity (NOFO) to conduct a series of regional workshops on artificial intelligence (AI) technologies and their policy implications to government officials, policymakers, researchers, and emerging leaders and influencers in the field of artificial intelligence. The project award will support expenses for beneficiaries to attend international meetings on AI. It will also provide targeted technical assistance to select countries to aide in the development of national strategies, plans, or regulations relating to AI.

Deadline: August 20, 2021

[Directorate for Geosciences/NSF - Grand Challenges in Integrative Geospace Sciences: Advancing National Space Weather Expertise and Research toward Societal Resilience \(ANSWERS\)](#)

The Advancing National Space Weather Expertise and Research toward Societal Resilience (ANSWERS) solicitation has the goal of bringing together collaborative teams of solar and geospace observers, theorists, modelers, experimenters, educators and computational experts to address some of the most challenging problems in solar and space physics and space weather. The purview of this new holistic solicitation goes beyond the scope of each of the long-standing programs in the Geospace Section (GS) of the NSF Division of Atmospheric and Geospace Sciences (AGS): Aeronomy (AER), Coupling, Energetics, and Dynamics of Atmospheric Regions (CEDAR), Geospace Environment Modeling (GEM), Magnetospheric Physics (MAG), Solar Terrestrial Research (STR), and Solar, Heliospheric, and Interplanetary Environment (SHINE).

ANSWERS enables deep and transformative understanding of the dynamic, integrated Sun-Earth system and the solar and terrestrial drivers of space weather and their effects "from Sun to mud." In combination with forward-looking educational endeavors, ANSWERS also aims to advance the nation's science, technology, engineering, and mathematics (STEM) expertise and build societal resilience against space weather hazards.

The purpose of the Grand Challenges in Integrative Geospace Sciences: Advancing National Space Weather Expertise and Research toward Societal Resilience (ANSWERS) solicitation is to support transformative, use-inspired basic research that has the potential to fill key knowledge gaps regarding the integrated Sun-Earth coupled system and space weather, and in combination with forward-looking educational endeavors, to advance the nation's STEM expertise and build societal resilience against space weather hazards.

ANSWERS creates opportunities for collaborations involving solar and geospace observers, theorists, modelers, software developers, and laboratory experimenters as well as experts in STEM education and SWx policy. Proposing teams must have complementary expertise to deal with the full Sun-Earth system and SWx phenomena as well as geospace education. Proposals will be accepted from small teams (up to 6 funded PI, Co-PIs, and senior personnel in total) and large teams. As cultivating future space weather expertise is an important aspect of ANSWERS, researchers within 10 years of PhD must be included in all proposing teams regardless of team size and comprise approximately half or more of large teams.

Deadline: August 23, 2021

[Directorate for Computer and Information Sciences and Engineering/NSF - Center for Advancement and Synthesis of Open Environmental Data and Sciences](#)

NSF seeks to establish a Center fueled by open and freely available biological and other environmental data to catalyze novel scientific questions in environmental biology through the use of data-intensive approaches, team science and research networks, and training in the accession, management, analysis, visualization, and synthesis of large data sets. The Center will provide vision for speeding discovery through the increased use of large, publicly accessible datasets to address biological research questions through collaborations with scientists in other related disciplines. The goal of this activity is to establish a center to support discovery through integration, visualization, analysis, and synthesis of open biological and environmental data and sciences to rapidly advance understanding of the Earth's biota in the face of environmental change. The Center will become an exemplar of open, inclusive, and team science and will provide a vision for speeding discovery through its application to research questions that span spatiotemporal scales in biology and related disciplines. The Center will support the generation of novel research questions and approaches and serve as an incubator for team-based, data-driven research as well as tool and application development. Integration of robust approaches to data handling, informatics, software and data cyberinfrastructure development, and access to vast computation resources will accelerate discovery as well as the convergence of environmental science disciplines and sub-disciplines on standards and best practices that provide the foundation for open science. It will spur collaborative interactions that integrate and synthesize data and activities among the facilities and research initiatives that produce open biological and other environmental data, as well as among cyberinfrastructure efforts that support the discovery, analysis, and use of applicable open data to find solutions to compelling research questions. Building on prior and existing NSF synthesis centers (see further, below), this Center will provide visionary leadership for open science in an increasingly data-rich, collaborative and virtually connected research environment.

Deadline: September 15, 2021

[Defense Established Program to Stimulate Competitive Research \(DEPSCoR\)](#)

The Department of Defense (DoD) announces the fiscal year 2021 (FY21) Defense Established Program to Stimulate Competitive Research (DEPSCoR) – Capacity Building. The program is sponsored and managed by the Basic Research Office, Office of the Under Secretary of Defense for Research and Engineering (OUSD [R&E]), awarded by the Air Force Office of Scientific Research (AFOSR), and administered through the Office of Naval Research (ONR). The DoD plans to award FY21 DEPSCoR appropriations through this announcement.

The aim of DEPSCoR is to improve the research capabilities at institutions of higher education (IHE) in eligible States/Territories to perform competitive basic research in science and engineering that is relevant to the DoD mission and reflect national security priorities.

To address the program's aim, DEPSCoR – Capacity Building (CB) objectives are to:

- Jumpstart capability development in the State/Territory through increased human, technical, and management resources.
- Achieve excellence in a DoD-relevant research area through funding to support equipment, education, research, and other relevant activities.

Grants awarded under this program are intended to support the strategic objectives of IHEs (either individually or in partnership with others) in DEPSCoR States/Territories to achieve basic research excellence in areas of high relevance to the DoD. Proposals will vary depending on technical field and geographic region.

Deadline: September 16, 2021

[Directorate for Computer and Information Sciences and Engineering/NSF - Computer and Information Science and Engineering \(CISE\) Research Initiation Initiative \(CRII\)](#)

The NSF Directorate for Computer and Information Science and Engineering (CISE) seeks to award grants intended to support research independence among early-career academicians who specifically lack access to adequate organizational or other resources. It is expected that funds obtained through this program will be used to support untenured faculty or research scientists (or equivalent) in their first three years in a primary academic position after the PhD, but not more than six years after completion of their PhD for proposals submitted in 2021, and not more than five years after completion of their PhD for proposals submitted after 2021. Applicants for this program may not yet have received any other grants or contracts in the PI role from any department, agency, or institution of the federal government, including from the CAREER program or any other program, post-PhD, regardless of the size of the grant or contract, with certain exceptions as noted below. Serving as Co-PI, Senior Personnel, Postdoctoral Fellow, or other Fellow does not count against this eligibility rule. Importantly, the CRII program seeks to provide essential resources to enable early-career PIs to launch their research careers. For the purposes of this program, CISE defines "essential resources" as sufficient funds for 48 months of graduate student support. Faculty at undergraduate and two-year institutions may use funds to support undergraduate students, and may optionally use the additional RUI designation.

This solicitation encourages potentially transformative proposals in any area of CISE research from PIs who are in their first academic position post-PhD. The goal is for the PI to have the essential resources to launch their research career so that they may establish an independent research profile.

Deadline: September 20, 2021

[National Science Foundation - Collaborative Research in Computational Neuroscience \(CRCNS\)](#)

Computational neuroscience provides a theoretical foundation and a rich set of technical approaches for understanding complex neurobiological systems, building on the theory, methods, and findings of computer science, neuroscience, and numerous other disciplines. Through the CRCNS program, the U.S. National Science Foundation (NSF), National Institutes of Health (NIH), and Department of Energy (DOE); the German Federal Ministry of Education and Research (Bundesministerium für Bildung und Forschung, BMBF); the French National Research Agency (Agence Nationale de la Recherche, ANR); the United States-Israel Binational Science Foundation (BSF); Japan's National Institute of Information and Communications Technology (NICT); and Spain's State Research Agency (Agencia Estatal de Investigación, AEI) and National Institute of Health Carlos III (Instituto de Salud Carlos III, ISCIII) support collaborative activities that will advance the understanding of nervous system structure and function, mechanisms underlying nervous system disorders, and computational strategies used by the nervous system.

Deadline: November 23, 2021

UPCOMING EVENTS



Trustworthy Artificial Intelligence for Environmental Science (TAI4ES) Virtual Summer School

July 26-29, 2021 – held by AI2ES and NCAR

Topics Include:

- Trustworthy AI for Environmental Science
- Explainable, Robust, Physics-based AI
- AI, Ethics, and Trust
- Case Studies
- R2O Tips and Tricks

Registration:
bit.ly/tai4esreg

Website:
bit.ly/tai4es

NSF AI Institute for Research on Trustworthy AI in Weather, Climate, and Coastal Oceanography

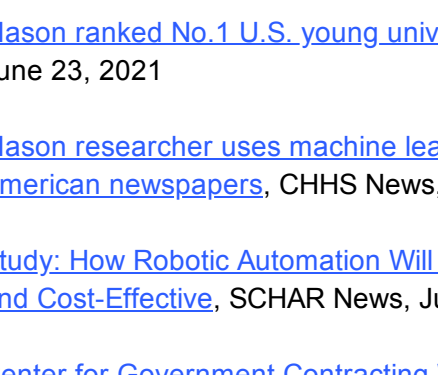
[RRoCCET21](#)

Introducing RRoCCET21, a virtual conference **August 10th through 12th** for researchers interested in using cloud computing in their work. Hosted by researchers with a wide range of expertise, this conference explores the benefits and opportunities unlocked by migrating to the public cloud. The program presents the cloud as an accessible platform for research computing, including case studies, discussion time and short tutorials on key tools and technologies.

The RRoCCET21 conference is organized by CloudBank, an NSF-funded initiative that helps the computer science community access and use public clouds for research and education.

[Learn more here](#)

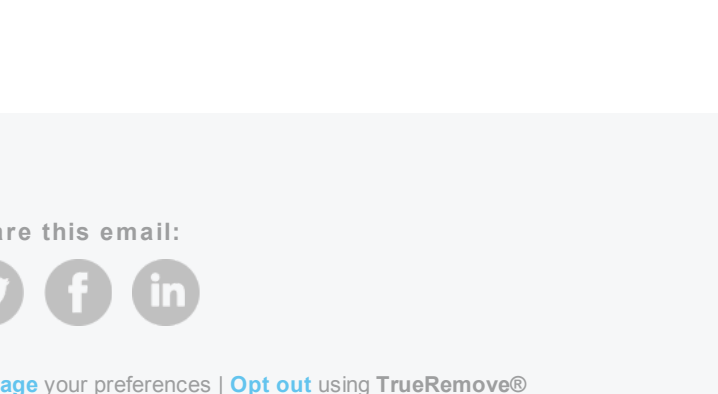
I-CORPS AT GMU



The NSF I-Corps is a program aimed at teaching university researchers the process for moving a university research discovery towards commercialization. Program participants will use the Lean Launchpad curriculum to assess the commercial viability of opportunities that arise from academic research in the STEM fields, by conducting customer interviews and working closely with mentors who have commercialization expertise.

The George Mason University I-Corps Site program will work on exploratory business ventures started by faculty, staff, students and recent alumni, training up to 30 Site teams each academic year to accelerate business exploration and creation.

[Learn more here](#)



SCHOLARSHIPS & AWARDS

CRA-WP
Computing Research Association
Widening Participation

[ACM Distinguished Member](#)

Distinguished ACM Member must have achieved a significant accomplishment in the field of computing, computer science, or information technology. Candidates must demonstrate substantial depth and breadth of understanding of the field and serve as mentors and role models to others in their field.

[Learn more here](#)

Deadline: August 01, 2021

STUDENT OPPORTUNITIES

[Non-Academic Research Internships for Graduate Students \(INTERN\) Supplemental Funding Opportunity](#)

Fostering the growth of a globally competitive and diverse research workforce and advancing the scientific and innovation skills of the U.S. is a strategic objective of the National Science Foundation (NSF). U.S. global competitiveness depends critically on the readiness of the Nation's Science, Technology, Engineering and Mathematics (STEM) workforce and NSF seeks to continue to invest in programs that directly advance this workforce. As part of this effort, a supplemental funding opportunity is available in fiscal years FY 2021 and beyond to provide graduate students with experiential learning opportunities through research internships to acquire core professional competencies and skills to support careers in any sector of the U.S. economy. NSF currently invests in a number of graduate student preparedness activities and has historically encouraged principal investigators (PIs) to include such activities in research proposals to NSF. This Dear Colleague Letter (DCL) describes funding opportunities at NSF to ensure graduate students are well prepared for the 21st-century STEM workforce.

[Learn more here](#)

JOB/INTERNSHIP OPPORTUNITIES

[Full-time Opportunities](#)

Digital Media Manager, American Council on Renewable Energy -

[Apply here](#)

Senior Digital Product Designer, Ford Motor Co -

[Apply here](#)

[Internship Opportunities](#)

Digital Hardware Engineer, Herrick Technology Laboratories -

[Apply here](#)

Digital Media Intern, Houston Texans -

[Apply here](#)

FUNDING ANNOUNCEMENTS, AWARDS AND ACCOMPLISHMENTS

[Lightweight Resource- and Workload-aware Malware Detection in IoT Networked Devices](#)

PI & Co-PIs: Pudukotai Dinakarrrao, Sai Manoj, College of Engineering and Computing

Funding source: Virginia Research Investment Fund

[Data-Drive Biomechanical Simulation of Eye Movement and Strabismus](#)

PI & Co-PIs: Wei, Qi, College of Engineering and Computing

Funding source: US Department of Health and Human Services (DHHS)

[Hardening Cybersecurity for mmWave Massive MIMO 5G Networks at Physical Layer](#)

PI & Co-PIs: Zeng, Kai, Mahamadi, College of Engineering and Computing

Funding source: US Department of the Army

[Provide Analysis & Evaluation Research Support for Roadside Safety Team](#)

PI & Co-PIs: Kan, Cing-Dao, College of Health & Human Services

Funding source: US Department of Transportation (US DOT)

[AI and Advanced Analytics for SAFE-SIM](#)

PI & Co-PIs: Raz, Ali Khalid, Costa, Paulo Cesar, College of Engineering and Computing

Funding source: US Department of Defense

[Anytime Reasoning and Analysis for Kill-Web Negotiation and Instantiation across Domains \(ARAKNID\)](#)

PI & Co-PIs: Costa, Paulo Cesar, College of Engineering and Computing

Funding source: US Department of the Air Force (USAF)

IDIA IN THE NEWS

[Mason ranked No.1 U.S. young university by Times Higher Ed](#), Mason News, June 23, 2021

[Mason researcher uses machine learning to examine use of Bible quotations in American newspapers](#), CHHS News, June 21, 2021

[Study: How Robotic Automation Will Make Public Sector Agencies Faster, More Efficient, and Cost-Effective](#), SCHAR News, June 22, 2021

[Center for Government Contracting Wins Over \\$1 Million for Defense Finance Studies](#), Business School News, June 22, 2021

Share with us!

We would love to hear your research activities, awards and recent publications. We are also working with your colleges and others in compiling this information to keep university leadership, policy-makers, businesses, and organizations apprised of digital innovation-related research activities at Mason. Whether you have a success story or concern or an idea, we are eager to hear from you.

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