Research Funding Opportunities

**Organization:** DARPA
**Solicitation Name:** Strategic Technology Office (STO)
**Deadline:** Open

**Summary:** STO is developing a mission-focused technology portfolio aimed at peer competition across all phases and levels of intensity. When one looks at the full spectrum of peer competition, there are two fundamental drivers: The pace of peer modernization and growth of conventional military capabilities; and the effectiveness of peer adversary incremental expansion of influence and coercion by management of escalation and competitive actions below the threshold of conventional conflict. STO is helping to address these challenges with two major thrust areas: (1) Mosaic Warfare (MW) and (2) Shaping the Battlespace (StB). Research areas of current interest to STO include, but are not limited to, the following topics:

- Acoustic communication and sensing,
- Adaptability,
- Advanced computing,
- Architecture and advanced systems engineering,
- Artificial intelligence,
- Autonomy and control algorithms,
- “Big data”
- Combat identification,
- Communications and networking,
- Virtual and adaptive,
- Complexity management,
- Critical infrastructure defense,
- Decision Aids and C2 technology,
- DevOps and novel software development and integration,
- Digital twins,
- Directed energy (DE),
- Distributed autonomy and teaming (machine-machine, human-machine),
- Effects chain functions (disaggregated Find, Fix, Finish, Target, Engage, Assess),
- Electro-Optic/Infrared sensors,
- Electromagnetic Warfare (EW),
- High frequency (HF) communications and sensing,
- High voltage electric power systems and architecture,
- Human behavior modeling,
- Human-machine symbiosis,
- Logistics and supply chain analytics and C2,
- Integration and reliability technologies,
- Interoperability,
- Modeling and simulation,
- Microwave and millimeter wave communications and sensing,
- Novel kinetic effects,
- Non-kinetic effects (EW, DE, cyber),
- Photonics,
- Radio technologies (especially software-defined and novel waveforms and processing),
- Radar and adaptive arrays,
- Robotics,
- Seekers and other expendable sensors and processing,
- Sensors and analytics,
- Signal processing,
- Space sensors, communications, autonomy, and architectures,
- (especially supporting, proliferated low earth orbit constellations),
- Strategy analysis technology,
- System of systems,
- Undersea and seabed technology,
- Tactics development technology,
- Testing and data collection,
- Very Low Frequency (VLF) technology

**Link:** [https://sam.gov/opp/872c239e98254252bb88283a1d8e3fc7/view](https://sam.gov/opp/872c239e98254252bb88283a1d8e3fc7/view)

**Organization:** NSF
**Solicitation Name:** Cyber Physical Systems Proposal
**Deadline:** Varies by size

**Summary:** Cyber-physical Systems (CPS) are engineered systems that are built from, and depend upon, the seamless integration of computation and physical
components. CPS tightly integrate computing devices, actuation and control, networking infrastructure, and sensing of the physical world. The system may include human interaction with or without human aided control. CPS may also include multiple integrated system components operating at wide varieties of spatial and temporal time scales. They can be characterized by architectures that may include distributed or centralized computing, multi-level hierarchical control and coordination of physical and organizational processes. Advances in CPS should enable capability, adaptability, scalability, resilience, safety, security, and usability far beyond what is available in the simple embedded systems of today. CPS technology will transform the way people interact with engineered systems — just as the Internet has transformed the way people interact with information. CPS are driving innovation and competition in a range of sectors, including agriculture, aeronautics, building design, civil infrastructure, energy, environmental quality, healthcare and personalized medicine, and transportation.


**Organization:** NSF  
**Solicitation Name:** BPE  
**Deadline:** Dec. 3, 2021 LOI and January 28, 2022  
**Summary:** This solicitation builds upon the prior Broadening Participation in Engineering (BPE) Program Description (PD 19-7680) and encompasses multiple pathways for engaging the engineering community: Track 1: Planning and Conference Grants, Track 2: Research in Broadening Participation in Engineering, Track 3: Inclusive Mentoring Hubs (IM Hubs), and Track 4: Centers for Equity in Engineering (CEE).

Proposals in Tracks 1 and 2 can be accepted at any time. However, it is encouraged that projects seeking possible funding for the current Fiscal Year submit their proposals no later than June 30th. Proposals submitted after this date will be considered for funding in the subsequent Fiscal Year.


**Reminder**

The annual seminar is presented by Dr. M.S. (Peg) AtKisson, president of AtKisson Training Group, LLC. The seminar will be held virtually over 4 days, 2 hours per day, on **October 29, November 5, 12, and 19 from 10:00am – noon (Mountain)**. Online registration is required and now open at [http://research.usu.edu/rd/faculty-gw-seminar](http://research.usu.edu/rd/faculty-gw-seminar). There is no cost to attend the seminar. Please remember that seminar attendance is an eligibility requirement for the Office of Research’s seed grant program. Faculty must attend all 4 virtual sessions to meet this requirement.
Internal Seed Grants Due to COE:

Effective for the December 2021 COE submission deadline, there will be some changes on seed grant program, as indicated in the following:

- New conflict of interest form (appendix)
- Applications must include all appendices – if one or more don’t apply to a project, a single page for each should be included that states it is not applicable (appendices don’t count toward any page limitations)
- CVs for external Co-Is on seed grant projects should be included in appendix as well as a clear description of what their role in the project will be (Management Plan section of Research/Project Plan)
- A separate current & pending support form and conflict of interest form must be included for all USU investigators (PI and Co-Is)
- If project will involve surveys, draft questions should be included in Supplementary Documentation appendix
- If project will involve access to sites/land/data sets owned by others, documentation that access is/will be granted should be included in Supplementary Documentation appendix

Changes to the office of research and COE seed grant websites will be live early next week. Applicants will need to make sure they are using the updated forms and including in their applications the new pieces of information detailed above, as necessary.

Please note the deadline for coming submission to the COE is Dec 15, 2021. Please let Dr. Rose Hu know if there are questions.