

Funding Opportunity: DOD Releases FY 2022 MURI BAA

Lewis-Burke Associates LLC – March 23, 2021

The Department of Defense (DOD) released a broad agency announcement (BAA) for the fiscal year (FY) 2022 Multidisciplinary University Research Initiative (MURI), as part of the larger University Research Initiative (URI) aimed at institutions of higher education. The MURI program remains one of the signature DOD research programs for the university community and stands as the benchmark for building a defense-oriented research capability on campus. The MURI program supports high-risk basic research in science and engineering, and each program is managed by a program manager from one of the Services.

The Army, Navy, and Air Force basic research offices have released 25 topics this year. FY 2022 MURI topics include:

Air Force Office of Scientific Research (AFOSR)

- 1) Social Network-Transcendent Behavioral Dynamics
- 2) Microelectronic Test Science Exploiting Latent Energy and Electromagnetic Radiation
- 3) Cavity Molecular Polaritons
- 4) Effects of Radiation Damage on Performance of Wide-Bandgap Electronics
- 5) Understanding Neural Systems Integration for Competent Autonomy in Decision and Control
- 6) Nonlinear Optical Material Design with Extreme Interband Nonlinearities
- 7) Synthetic Quantum Matter
- 8) Composability of Synthetic Biological Circuits

Army Research Office (ARO)

- 9) Bio-architected Responsive Materials with 3D Nanoscale Order
- 10) Topological Seeds of Complex Response in Materials
- 11) Connectivity and Transport in Disordered Hyperuniform Networks
- 12) Irregular Metamaterial Networks
- 13) Uncovering the Underlying Neurobiological Mechanisms of Cognitive Fatigue
- 14) Gut-Neuronal Signaling Through Polymeric Mucin via Chemical Probes and Imaging
- 15) ELECTROBIOLOGY: Electronic Control of Biological Communication

Office of Naval Research (ONR)

- 16) Novel Routes to Majorana Qubits for Topologically-Protected Quantum Information
- 17) Molecular Doping of Organic Electronic Materials
- 18) Learning from Hearing
- 19) Hydrodynamics of Fish Schooling
- 20) Self-learning for Real-world Perception
- 21) Fundamental Non-equilibrium Processes in Weakly Ionized Hypersonic Flows
- 22) Ab Initio Understanding of Detonation Based Combustion in Multiphase Mixtures
- 23) Bioinspired Design of Energy-Self Sufficient Multi-functional Soft Material Systems
- 24) Systems-Level Foundations for Agile, Dynamic, and Ad Hoc Human Autonomy Teams
- 25) Environmental DNA-based Monitoring of the Marine Environment (EDMON)

Similar to previous years, the topics center on materials and quantum sciences but also include more topics on electronics and bioengineering.

DOD encourages faculty to engage with the Research Topic Chiefs assigned to each topic area (see section II.H) through the white paper process to assess the feasibility of proposed topics. Topics listed above describe the focus areas important to each Service and are not meant to restrict the possible directions awarded research could take.

White Papers: Not required, but prospective awardees are strongly encouraged to submit white papers to minimize the labor and cost associated with the production of detailed full proposals.

Timeline for Submission:

- Questions and inquiries regarding whitepapers are due by **May 24, 2021**
- White papers are due **June 7, 2021 by 11:59 PM ET**
- Notification of evaluations of white papers are expected on **July 6, 2021**
- Questions regarding full proposals are due by **September 13, 2021**
- Full proposals are due on **September 27, 2021 by 11:59 PM ET**
- Notification of selection for awards are expected to be made on **March 1, 2022**
- Grants are estimated to start on **May 1, 2022**

Total Funding and Award Size: DOD expects \$190 million to be made available, pending out-year appropriations. Typical individual awards range from \$1.25 to \$1.5 million per year for a base period of three years with the option to extend the grant for an additional two years, bringing the total maximum term of the award to five years.

Eligibility and Limitations: The competition is open to U.S. institutions of higher education, including DOD institutions of higher education, with degree-granting programs in science and or engineering. While industry, DOD laboratories, and foreign universities may not receive funding, DOD encourages universities to collaborate with entities focused on applied and transitional research for potential commercial applications of MURI-funded research.

Sources and Additional Information:

- The full FY 2022 MURI solicitation issued by each Military Service is available at www.grants.gov by searching “N00014-21-S-F004” (Navy), “W911NF-21-S-0008” (Army), and “FOA-AFRL-AFOSR-2021-0003” (Air Force).
- Additional information on MURI’s basic research efforts is available at <https://www.onr.navy.mil/en/Education-Outreach/Sponsored-Research/University-Research-Initiatives/MURI> and <https://www.arl.army.mil/business/muri/>.