Multidisciplinary Research Program of the University Research Initiative
Deadline: 09/14/2020
This opportunity includes the Office of Naval Research, Army Research Office, and Air Force Office of Scientific Research. The MURI program supports basic research in science and engineering at U.S. universities that is of potential interest to DoD. The program is focused on multidisciplinary research efforts where more than one traditional discipline interacts to provide rapid advances in scientific areas of interest to the DoD. The DoD's basic research program invests broadly in many fields to ensure that it has early cognizance of new scientific knowledge.

Areas of Interest in this announcement:

NAVY
Topic 1: Molecular Qubits for Synthetic Electronics
Topic 2: A Brain-based Compositional Framework for Robust Computer Vision
Topic 3: Littoral Ocean Dynamics off Rocky Coasts and Shorelines
Topic 4: Fog and Turbulence
Topic 5: Dynamic Tuning of Thermal Transport
Topic 6: Chemically and Thermally Insensitive Super/Ultra-Hard Materials
Topic 7: Narrative, Moral and Social Foundations of Social Cyber-Attack in Social Media
Topic 8: A Dynamics and Control Theory of Safe, Cognitive and Learning Systems
Topic 9: Understanding Turbulence-Chemistry Interactions in Non-Equilibrium, High-Speed Flows
Topic 10: Predicting Organic Molecular Decomposition

ARMY
Topic 11: Anomalous Dipole Textures in Engineered Ferroelectric Materials
Topic 12: Cyber Autonomy through Robust Learning and Effective Human/Bot Teaming
Topic 13: Highly Heterogeneous Meta-macrostructures Created via Fine-particle Interactions
Topic 14: Non-Silica Inorganic Material Phases Synthesized from Genetically Modified Diatoms
Topic 15: Novel Mechanisms of Neuro-Glio Bio-Computation and Reinforcement Learning
Topic 16: Quantum Network Science
Topic 17: The Same is Different: Integrating Multiple Phenomena in Single Materials
Topic 18: Tunable Dilute Anion III-Nitride Nanostructures for Stable Photocatalysis

AIR FORCE
Topic 19: Mechanisms of Novel Reactivity in Aqueous Microdroplets
Topic 20: Topological Plasma Electromagnetics
Topic 21: Interfacial Engineering of Superconductors
Topic 22: Targeted Optical Stimulation of Individual Retinal Photoreceptors
Topic 23: Quantum Random Access Memory
Topic 24: Metasurface Edge Sensing, Processing and Computing
Topic 25: Non-Hermitian Programmable Materials at Exceptional Points
Topic 26: Mathematical Foundations for Enabling Robust Optimal Design of Hypersonic Systems