

Academia FY2019

Arizona State University (Tempe, AZ)

- Cognitive Human Enhancements For Cyber Reasoning Systems (CHECRS) software system; provides research, design, development, demonstration, test, integration, collaboration, and delivery of a CHECRS software system that will enable computers and humans to collaboratively reason over software artifacts (source code, compiled binaries, etc.) with the goal of finding zero day vulnerabilities at a scale and speed appropriate for the complex software ecosystem; 29 Nov 2018
 - o AFRL Rome, NY (FA8750-19-C-0003)
- DARPA-based proposal titled "Diagnostic Epigenetics of Infectious agents and Chemical Toxicity"; 22 July 2019
 - o Army Contracting Command, Aberdeen Proving Ground, MD (W911NF-19-C-0039)

Boston College Institute for Scientific Research (Boston, MA)

- R&D: extending and exploiting existing tools, assets and information to maximize near-term benefits to the government, while simultaneously generating new ideas, innovations and basic research for next-generation technologies promising new, in some cases revolutionary, capabilities for the warfighter → Boston College, MA; and Kirtland AFB, NM; 22 March 2019
 - o AFRL, Kirtland AFB, NM (FA9453-19-C-0401)

University of California - Berkeley

- study learning mechanisms to create computational models and enhance artificial intelligence approaches to learning, such as deep learning and reinforcement learning; 9 Sept 2019
 - o NAVWAR Pacific, San Diego, CA (N66001-19-2-4034)

University of California-Santa Barbara, Santa Barbara, CA

- collaborative biotechnologies; issued 30 Nov 2018
 - o Army Contracting Command, Aberdeen Proving Ground, MD (W911NF-19-D-0001)

Charles Stark Draper Lab (Cambridge, MA)

- research into the applications of technologies to meet guidance requirements for operations on the Common Missile Compartment for the U.S. Columbia-class program and the UK Dreadnought-class program; provide specialized technical knowledge and support for the hypersonic guidance, navigation & control application; provide technical and engineering services to support the Guidance, Navigation and Control system that will support the Navy's hypersonic flight experiments → Cambridge, MA (81%); El Segundo, CA (19%); issued 1 Oct 2018, 9 Nov 2019
 - o Strategic Systems Programs, Washington, D.C. (N00030-19-C-0001)
- Trident II (D5) MK6 Guidance Equivalent Units → Cambridge, MA (30.5%); Clearwater, FL (20.6%); Pittsfield, MA (43.2%); McKinney, TX (5.7%); 15 Feb 2019
 - o Strategic Systems Programs, Washington, DC, (N00030-19-C-0008)
- research into the applications of technologies to meet guidance requirements for the U.S. Trident II (D5) Strategic Weapon System, and provide specialized technical knowledge for the guidance, navigation and control applications that will support Navy programs; N00030-20-C-0004; 30 Sept 2019
 - o Draper has been the design agent for Navy Strategic Missile Guidance Systems since the late 1950's. "No other institution possesses the combined, unique system test facilities, receives knowledge and overall experience to understand and resolve the issues associated with the Navy's TRIDENT II guidance and reentry mission."
 - o Strategic Systems Programs, D.C.

University of Dayton Research Institute (Dayton, OH)

- the Structures Engineering Research program; basic, applied, advanced, and demonstration / validation research to develop, demonstrate, integrate, and transition new aerospace vehicle structures technologies to the warfighter; these structures' technologies will provide cost-effective, survivable aerospace vehicle platforms capable of accurate delivery of weapons and cargo worldwide; 21 Dec 2018 [w Universal Technology Corp., Dayton, OH; Booz Allen Hamilton, McLean, VA] via AFRL Wright-Patterson AFB, Dayton, OH
 - o contracts: FA8650-19-D-2241, FA8650-19-D-2242, and FA8650-19-D-2243; initial task orders: FA8650-19-F-2245, FA8650-19-F-2246, FA8650-19-F-2248

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- Proactive Research Enabling Supportable Systems (PRESS); provides PRESS to improve materials and processes for maintainability and manufacturing; 26 April 2019
 - o AFRL Wright-Patterson AFB (FA8650-19-D-5630)
- scientific exploration for the discovery and/or advancement of power, energy, thermal, integration and control (PETIC) technologies to develop enabling materials, processes, devices, modeling and simulation for advanced high performance military weapon systems and emerging applications → work at the AFRL Wright-Patterson AFB (with UES Dayton, OH); FA8650-19-D-2905; 13 May 2019
 - o AFRL, Wright-Patterson AFB
- development of Hypersonic Vehicle Flight Test Structure. Provides design, fabrication, and flight testing of the payload structure on the GOLauncher 1 (GO1) subscale hypersonic flight vehicle; 24 May 2019
 - o AFRL, Wright-Patterson AFB (FA8650-19-C-2404)
- F-15 sustainment engineering studies; provides for systems/structural engineering field and programmed depot maintenance support, reliability and maintainability analysis and aircraft structural integrity program capability development and sustainment → work at Dayton, OH; and Robins AFB, GA; 3 July 2019
 - o AFLCMC Robins AFB, GA (FA8505-19-D-0003)
- enhancement and improvement to the non-destructive evaluation capabilities for aerospace structures and components at Wright-Patterson AFB; promotes discovery and provides increased accuracy, precision, reliability and optimization of the material state awareness of aerospace materials; 1 Aug 2019
 - o AFRL Wright-Patterson AFB (FA8650-19-D-5230)

Georgia Tech Applied Research Corp. (Atlanta, GA)

- Low Cost UAS Swarm Technology Distributed Autonomy prototyping, analysis, and support; N00014-18-S-B001; 8 Feb 2019
 - o Office of Naval Research, Arlington, VA (N00014-19-C-2023)
- development of vector sensors and arrays for deep and shallow water applications; 8 May 2019
 - o Office of Naval Research, Arlington, VA (N00014-19-C-2045)
- electronic warfare and avionics system support Georgia Tech Applied Research University and Affiliated Research Center; provides essential engineering, research and development capabilities and services for the development and sustainment of systems; 9 July 2019
 - o AFLCMC's Electronic Warfare, Robins AFB, GA (FA8523-19-D-0006)

Georgia Tech Research Institute (Atlanta, GA)

- support Defense Information Systems Agency (DISA) National Leadership Capability Command office; provides development & deployment of the Secure Integration Cloud, the Joint Access Database Environment and the encompassing system architecture known as Secure Web Services; 29 April 2019
 - o DISA/Defense Information Technology Contracting Organization, Scott AFB, IL (HC1028-19-C-0008)

University of Hawai'i, Applied Research Laboratory (Manoa, HI)

- research, development, engineering, and test & evaluation for programs throughout the Department of War → work in Manoa, HI; 13 May 2019
 - o Naval Sea Systems Command, Washington, D.C. (N00024-19-D-6400)

Johns Hopkins University, Applied Physics Laboratory (Laurel, MD)

- provide assessments & alternatives of offensive capabilities within the domains of air, land, sea, space and cyberspace, missions and warfare areas that asymmetrically mitigate threat effectiveness, impose cost, and/or create ambiguity in adversary decision-making; work will take place in the National Capital Region, including Arlington, VA; Alexandria, VA; issued 9 Jan 2019; 14 Feb 2019
 - o Washington Headquarters Services, Arlington, VA, (HQ0034-13-D-0003)
- engineering, development and research capabilities; HR0011-17-D-0001; 26 April 2019
 - o DARPA Arlington, VA
- research, development, engineering, and test and evaluation for programs; thematic areas of research, development, and engineering include, but are not limited to, missiles, radar, sonar, space, undersea warfare, command, control and communication (C3), anti-air warfare, strike warfare, information warfare, complex combat systems and the characteristics and limitations unique to the operating environment of DOD systems; R&D in the core competency areas

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approved for JHU/APL by DOD which include strategic systems test and evaluation; submarine security and survivability; space science and engineering; combat systems and guided missiles; theater air defense and power projection; and IT (C4ISR/IO); simulation, modeling, and operations analysis; N00024-13-D-6400; 17 May 2019

- NAVSEA D.C. (N00024-13-D-6400)
- support gov with development of prototypes, test plans, rapid fielding, operational experiments and changes in existing acquisition programs with a focus on identification and reduction of programmatic and technical risk provides for applied research; 31 May 2019, 29 July 2019
 - Washington Headquarters Services, Arlington, VA (HQ0034-19-D-0006)
- essential engineering, research, and/or development capabilities, in line with the core competencies established by the assistant secretary of defense for research & engineering, which designated JHU/APL as a University Affiliated Research Center (UARC) → work at JHU APL and Defense Information Systems Agency, Fort Meade, MD; 12 Sept 2019
 - Defense Information Technology Contracting Organization, National Capital Region (HC1047-19-D-0001)
- support the government with development of prototypes, test plans, rapid fielding, operational experiments and changes in existing acquisition programs focus on identification and reduction of programmatic and technical risk provides for applied research; 18 Sept 2019
 - Washington Headquarters Services, Arlington, VA (HQ0034-19-D-0006)

Louisiana State University System (Baton Rouge, LA)

- Nutritional Biochemistries Analysis services; 10 June 2019
 - Army Medical Research Acquisition Activity, Fort Detrick, MD (W81XWH-19-D-0010)

MIT Lincoln Laboratory (Lexington, MA)

- operation of the Lincoln Laboratory Federally Funded Research & Development Center; provides advanced technology research and development activities that focus on long-term technology development as well as rapid system prototyping and demonstration; FA8702-15-D-0001; 25 April 2019
 - AFLCMC Hanscom AFB, MA

Mississippi State University (Mississippi State, MS)

- test and validation of emerging propulsion technologies for drones; 21 Feb 2019
 - Army Contracting Command, Aberdeen Proving Ground, MD (W909MY-19-C-C002)
- Persistent Collaborative Situational Awareness to the Warfighter: High-Performance, Low-Acoustic Signature Unmanned Aircraft System Operations - Phase II; W909MY-19-C-C002; 30 Sept 2019
 - Army Contracting Command Aberdeen Proving Ground, MD

Oregon State University (Corvallis, OR)

- conduct research for a machine common sense (MCS) service for artificial intelligence and robotic systems; service will learn MCS planning and inference capabilities about objects, agents and places equivalent to the capabilities **of an 18-month-old infant**. OSU will train the service using a first-person infant simulator, driven by real world infant behavior data; 30 July 2019
 - NAVWAR Pacific, San Diego (N66001-19-2-4035)

University of Southern California (Los Angeles, CA)

- R&D of an artificial intelligence (AI) system that acquires machine common sense through observation from images, video and text by absorbing knowledge from both manually created sources and by human guidance; research seeks capabilities that can enable artificial intelligence agents to support search and rescue efforts, autonomous vehicle navigation in unfamiliar terrain and machines that can adapt to unforeseen circumstances; 5 Aug 2019
 - NAVWAR Pacific, San Diego (N66001-19-2-4032)
- develop an AI commonsense service with a unifying concept called the Multi-modal Open-World Grounded Learning & Inference (MOWGLI) that aims to harness and synthesize state-of-the-art AI research across representation learning, knowledge graphs, and explainable AI; “MOWGLI will perform minimally supervised, joint commonsense extraction and computer vision over multi-modal sources such as video and text. The result will be a commonsense knowledge graph that will support a set of intuitive everyday phenomena such as abduction, analogy, causality, agency, and physics in a unified reasoning engine”; 27 Sept 2019
 - DARPA via NAVWAR San Diego (N66001-19-2-4033)

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The University of Southern California (Marina del Rey, CA)

- DARPA research project → Marina del Rey, CA; Arlington, VA; Columbia, MD; 22 Aug 2019
 - o DARPA, Arlington, VA (HR0011-19-C-0084)

University of Texas at Austin Applied Research Laboratories

- "Improved Sonar Prediction and Exploitation using High-Fidelity Environmental Characterization"; 26 Sept 2019
 - o Office of Naval Research, Arlington, VA (N00014-19-C-2086)

The University of Toledo (Toledo, OH)

- space solar array architecture, power generation, and energy storage and distribution research; development of advanced materials, interfaces, and electrical contacts for high efficiency and high specific power tandem thin film photovoltaic technologies to meet the needs of the Air Force for on-demand power in space → work at Bancroft, OH; 19 July 2019
 - o AFRL Kirtland AFB, Albuquerque, NM (FA9453-19-C-1002)

Utah State University Research Foundation/Space Dynamic Lab (North Logan, UT)

- small satellite utility demonstration; R&D to maintain essential engineering, R&D capability in the areas of sensor development, image processing and data analysis; FA9453-16-D-0004; 3 Dec 2018
 - o AFRL Kirtland AFB, NM
- electro-optical R&D in the areas of exploitation software and advanced sensor and processing technologies including digital cameras, processing, compression, command and control, analog systems, power, communications, telemetry, radio frequency/optical sensor payloads and electromechanical systems/support; 5 Sept 2019
 - o Naval Research Laboratory, D.C. (N00173-19-C-2013)

University of Washington (Seattle, WA)

- work on "Backbone Components of an Arctic Mobile Observing System: seagliders, floats, SA and C2"; N00014-19-S-B001; 13 Sept 2019
 - o Office of Naval Research, Arlington, VA (N00014-19-C-2076)

Wichita State University (Wichita, KS)

- research on developing Modeling for Affordable, Sustainable Composites (MASC); provides development of a quantifiable, risk-based assessment methodology for determining the service life of advanced composite structures aided by high-fidelity damage modeling in order to optimize advanced composite structural design concepts; 15 May 2019
 - o AFRL, Wright-Patterson AFB (FA8650-19-C-5212)

Woods Hole Oceanographic Institution (Woods Hole, MA)

- research effort entitled, "Project Sundance"; 22 April 2019
 - o Office of Naval Research, Arlington, VA (N00014-19-C-2016)

academic programs to educate Department of the Navy acquisition personnel in support of the assistant secretary of the Navy for research, development and acquisition; 4 Sept 2019 via NAVSUP Fleet, Logistics Center Norfolk, Contracting Department, Philadelphia, PA

- UNC Chapel Hill, Chapel Hill, NC (N00189-19-D-Z033);
- University of Virginia Darden School Foundation Inc., Charlottesville, VA (N00189-19-D-Z034);