



**TUFTS UPDATE – MARCH 13, 2019**  
**PREPARED BY LEWIS-BURKE ASSOCIATES LLC**

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## **Introduction**

This edition of the Tufts Washington Update for early March includes administration, hearing, and agency updates as well as funding opportunities. Faculty, staff, and researchers are welcome to schedule calls with the Lewis-Burke Tufts team or meet with the team when they visit Washington, DC. Contact Amber Cassady, Lewis-Burke Associates LLC, at [amber@lewis-burke.com](mailto:amber@lewis-burke.com) with any questions or comments related to the Update's content or for more information on updates and opportunities.

## **Administration and Hearing Updates**

### **Lewis-Burke Summary of the FY 2020 President's Budget Request for Research, Education, and Healthcare**

On March 11, 2019, President Trump released his third budget proposal to Congress. One month late due to the longest government shutdown in U.S. history, the fiscal year (FY) 2020 budget request reflects the political priorities of the Trump Administration and kicks off the congressional budget and appropriations process. It is ultimately up to Congress to decide which proposals to embrace, modify, or reject as part of the annual appropriations process. While the request proposes cuts to many of the non-defense federal agencies of interest to the research, education and health communities, similar to prior years, Congress is likely to reject most of the proposed budget cuts to these federal agencies, programs, and projects.

President Trump's FY 2020 budget request sets out two main priorities—increasing military spending and building a barrier on the U.S.-Mexico border. However, these priorities set up confrontation with Congress and in particular a Democratic-controlled House. Congress is eager to negotiate a new, two year budget agreement that lifts the caps on discretionary spending for both defense and non-defense programs. The last budget agreement covered only FY 2018 and FY 2019 and without a new agreement, discretionary spending would have to be cut by \$126 billion below FY 2019 enacted levels. However, this budget request will delay and complicate the ability of Congress to work with the White House on a new budget agreement.


Similar to the previous two years, the budget request puts an emphasis on defense and national security at the expense of non-defense federal agencies and programs. The budget request would increase defense spending by about five percent to \$750 billion, while cutting non-defense programs by five percent or about \$55 billion below the FY 2019 enacted funding levels. The proposed budget technically adheres to the spending caps for FY 2020 set into law in the Budget Control Act of 2011. However, the Trump Administration added \$165 billion to a war-related account, called the Overseas Contingency Operations (OCO) account, which is exempt from the spending limits to boost military spending. Democrats in Congress have called for continued parity between defense and non-defense spending and view the use of OCO as a budget gimmick. The budget request also renews the fight over a border wall by requesting \$8.6 billion through the Departments of Homeland Security and Defense. In final FY 2019 funding bills passed in January, Congress rejected the President's \$5.7 billion request for the border wall and the legality of the emergency declaration is still being reviewed by the courts.

Consistent with prior years, major goals of the overall budget request also include shrinking the federal workforce, overhauling federal compensation and benefits, and cutting burdensome regulations. Proposed cuts to major federal programs and associated proposed cuts to federal staff along with changes to compensation and benefits has a negative impact on morale and the ability of the government to attract and retain top talent for program managers and other major positions. The budget also proposes major policy changes that will likely be rejected by Congress, such as a new border security and immigration enforcement fund to advance the Administration's border security and immigration changes, reforms to the Medicaid program, and users fees for the prescription drug pricing program.

While Congress will decide final funding levels for FY 2020 and is likely to reject many proposed cuts, the budget request still provides a useful window into major Administration priorities, some of which have bipartisan support, especially in science and technology areas, such as Artificial Intelligence, quantum information science, and cybersecurity.

While Lewis Burke will provide a more detailed analysis of each major federal agency next week, below is a snapshot of major winners and losers in the proposed budget request related to prior budget requests. The main point of comparison is not the FY 2019 enacted level but how a federal agency fared in the FY 2020 budget request compared to the FY 2019 budget request. This shows the relative priority for the Trump Administration and recommended areas for targeted increases. For example, a federal agency like the Department of Energy would be cut relative to FY 2019 congressional appropriations, but would still be a winner because of the \$1.3 billion in additional funding above the FY 2019 President's budget request to fund priority areas such as quantum science, exascale computing, and Artificial Intelligence. This is in sharp contrast to federal agencies that are proposed to receive less funding than the FY 2019 budget request level, such as the National Science Foundation, which is proposed to receive \$370 million less, and the Department of Education, which is proposed to receive \$1.2 billion less.

### ***Agencies at a Glance***

|                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                     |
|------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| <b>Department of Defense</b>             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |  |
| <b>FY 2019 PBR: \$ 686 billion</b>       | <ul style="list-style-type: none"><li>• Related to research, the request highlights autonomous systems, hypersonics, and artificial intelligence (AI) and includes \$208 million to scale up the DOD Joint Artificial Intelligence Center (JAIC) tasked with helping the Services implement AI capabilities.</li><li>• Creates Space Force as the sixth branch of the Armed Forces and establishment of U.S. Space Command as a new combatant command.</li></ul> |                                                                                     |
| <b>FY 2019 Enacted: \$ 674.4 billion</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                     |
| <b>FY 2020 PBR: \$ 718 billion</b>       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                     |

## Department of Energy



**FY 2019 PBR: \$ 30.4 billion**

**FY 2019 Enacted: \$ 35.7 billion**

**FY 2020 PBR: \$ 31.7 billion**

- Increased investments in quantum information science, AI, machine learning, microelectronic and genome science.
- New initiatives on advanced energy storage and materials for harsh environments for thermoelectric power plants.

## National Aeronautics and Space Administration



**FY 2019 PBR: \$ 19.9 billion**

**FY 2019 Enacted: \$ 21.5 billion**

**FY 2020 PBR: \$ 21 billion**

- Continues the Administration's emphasis on establishing a human presence in the lunar environment and increased commercialization of space.
- Science budget would see a slight decrease under the proposal.
- Proposal to restructure NASA's mission directorates.

## NIFA, Department of Agriculture



**FY 2019 PBR: \$ 1.3 billion**

**FY 2019 Enacted: \$ 1.5 billion**

**FY 2020 PBR: \$ 1.4 billion**

- NIFA's competitive research program would receive a \$85 million increase above FY 2019 enacted (20.5%).
- USDA's Agricultural Research Service (ARS) would be down \$409.5 million or 24.3%.
- Request supports the transfer of operational responsibility for the National Bio and Agro-Defense Facility (NBAF) from DHS to USDA.

## Department of Education



**FY 2019 PBR: \$63.2 billion**

**FY 2019 Enacted: \$71.4 billion**

**FY 2020 PBR: \$62 billion**

- Request includes aspects of the Administration's principles for a HEA reauthorization.
- Pell Grant maximum award proposed flat funding at \$6,195; expand to short-term programs.
- Proposes elimination of numerous grant and aid programs.

## National Institutes of Health



**FY 2019 PBR: \$ 35.5 billion**

**FY 2019 Enacted: \$ 39.1 billion**

**FY 2020 PBR: \$ 34.4 billion**

- Proposes \$50 million in a new effort focused on pediatric cancers.
- Proposes consolidating some activities of the Agency for Healthcare Research and Quality (AHRQ) within NIH.
- No mention of capping facilities and administrative, or indirect, cost rates.

## National Science Foundation



**FY 2019 PBR: \$ 7.4 billion**

**FY 2019 Enacted: \$ 8.1 billion**

**FY 2020 PBR: \$ 7.1 billion**

- At the time of this writing no budget details for this agency have been released.

### *Sources and Additional Information:*

- The President's FY 2020 budget request can be found at <https://www.whitehouse.gov/wp-content/uploads/2019/03/budget-fy2020.pdf>.

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### **Senate Committee on Investigations Holds "China's Impact on the U.S. Education System" Hearing**

On February 28, the Senate Homeland Security and Governmental Affairs Committee's (HSGAC) Permanent Subcommittee on Investigations (PSI) held a hearing entitled, "China's Impact on the U.S. Education System." Although the hearing focused primarily on Confucius Institutes, there were important implications for all institutions of higher education, particularly around immigration and Department of Education (ED) reporting. Two reports were released in conjunction with the hearing: a Government Accountability Office (GAO) report, "CHINA Agreements Establishing Confucius Institutes at U.S. Universities Are Similar, but Institute Operations Vary," and a PSI staff report, "China's Impact On The U.S. Education System" were released in conjunction with the hearing.

A major theme expressed by Chairman Rob Portman (R-OH) and Ranking Member Thomas Carper (D-DE) was the need for increased transparency and reciprocity between institutions and China. In his opening statement, Senator Portman referenced statements made by officials from the Federal Bureau of Investigations (FBI) that identified Confucius Institutes (CIs) as threats. Several senators highlighted the PSI staff report observation that China has provided over \$158 million in funding to U.S. schools for Confucius Institutes. Policymakers have continued to express concerns that the funding compromises academic freedom and requires U.S. institutions to comply with Chinese law.

The hearing raised two issues in the context of the Confucius Institutes, which have implications for institutions that do not have CIs: foreign gift reporting requirements under section 117 of the *Higher Education Act* (HEA) and the requirements of the Exchange Visitor Visa ("J-1"). The staff report noted that the "Subcommittee's investigation demonstrates that nearly 70 percent of U.S. schools that

received more than \$250,000 from Hanban failed to properly report that information to the Department of Education. Foreign government spending on U.S. schools is effectively a black hole, as there is a lack of reporting detailing the various sources of foreign government funding.” Deputy Secretary of Education Mitchell Zais stated that ED sees CIs as a concern and that the agency intends to work with the Committee to address the issue. He also stated that ED is willing to work with schools to help craft acceptable agreements and that the agency will work to make schools aware of the recommendations included in the PSI staff and GAO reports. Deputy Secretary Zais stated that while there was no timeline from ED on updating the gift reporting guidance, an update would be forthcoming. He also noted that the statute regarding foreign gift reporting does not address gifts to foundations affiliated with institutions of higher education.

The PSI staff report stated, “Some U.S. schools have struggled to comply with the requirements of the Exchange Visitor Visa (or “J-1”). In 2018, the State Department revoked 32 J-1 Professor and Research Scholar visas for Confucius Institute teachers who were not conducting research, but instead were teaching at K–12 schools.” In her testimony, Jennifer Galt, Principal Deputy Assistant Secretary, Bureau of Cultural and Educational Affairs at the U.S. Department of State (State), said that State intends to increase the number of CI site visits; enhance its electronic review of visas, including through the Student and Exchange Visitor Information System (SEVIS) system; and continue its ongoing engagement with visa sponsors. Other issues addressed during the hearing included a recommendation by Jason Bair, Acting Director of International Affairs and Trade at GAO, on removing confidentiality clauses from CI contracts and making it clear that U.S. institutions retain the ultimate decision-making authority. Senator Portman stressed the need for new guidance from ED on foreign gift reporting and that, absent full transparency and reciprocity from China, CIs should not continue on U.S. campuses. Senator Carper noted that institutions need to change their relationship with CIs and remain vigilant.

It is extremely likely that future legislation and policies will continue to focus on ways to combat perceived attempts by China to influence academia and research. In his written testimony, Deputy Undersecretary Zais noted that ED continues to confer with the U.S. Department of Defense to support the protection of U.S. intellectual property, a result of a directive included in the *National Defense Authorization Act for Fiscal Year 2019*. These types of directives will continue to be included in future legislation, with the potential to expand to visa and higher education legislation as well.

#### *Sources and Additional Information:*

- Opening statements, testimony, and a video from the hearing is available at <https://www.hsgac.senate.gov/subcommittees/investigations/hearings/chinas-impact-on-the-us-education-system>.
- The GAO report is available at <https://www.gao.gov/assets/700/696859.pdf>.
- The PSI staff report is available at <https://www.hsgac.senate.gov/imo/media/doc/PSI%20Report%20China's%20Impact%20on%20the%20US%20Education%20System.pdf>.

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## **House Science, Space, and Technology Committee Holds Hearing on U.S. Leadership in Science and Technology**

On March 6, the House Science, Space, and Technology (HSST) Committee held a hearing entitled, “Maintaining U.S. Leadership in Science and Technology.” This hearing was one of the first full Committee hearings under the new leadership of Chairwoman Eddie Bernice Johnson (D-TX) and Ranking Member Frank Lucas (R-OK). In their opening statements, Reps. Johnson and Lucas emphasized the need for growing US investments in research and development to maintain competitiveness with China and other nations. Rep. Lucas’ commitment to federal research funding is especially notable, as he stated that he wants to work together with appropriators to continue the fiscal year (FY) 2019 R&D increases in FY 2020 and beyond.

Workforce development, STEM education, broadening participation, and academic-industry partnerships were major themes of the hearing as both Members and witnesses discussed workforce shortages and skills gaps that threaten to limit innovation and economic development around the country. Witnesses suggested mechanisms that bring together academia, industry, and government to encourage better alignment of curricula with industry and government needs, foster collaboration, and improve competitiveness in key sectors such as advanced manufacturing. Members also asked about lifelong learning, stackable credentials, and how to adapt our education system to meet the needs of the changing economy. Several members including Chairwoman Johnson noted the importance of broadening participation of women and underrepresented minorities in STEM. Witnesses praised the Committee’s bipartisan effort to develop legislation on sexual harassment as one step in making a better culture for women.

The HSST Committee has several freshmen members and it was interesting to see their priorities. Many of the Republican members asked about Chinese theft of American intellectual property and research espionage. Several members on both sides also noted the important connections between science and technology and national security. Several returning Democratic Members asked about climate change mitigation and needed research efforts.

### *Sources and Additional Information:*

- Opening statements, testimony, and a video from the hearing is available at <https://science.house.gov/legislation/hearings/maintaining-us-leadership-science-and-technology>.
- The Combating Sexual Harassment in Science Act of 2019 can be found at <https://www.congress.gov/bill/116th-congress/house-bill/36>.

## **Agency Updates and Funding Opportunities**

### **Air Force Office of Scientific Research Releases FY 2020 Young Investigator Program BAA**

On March 6, the Air Force Office of Scientific Research (AFOSR) released its fiscal year (FY) 2020 broad agency announcement (BAA) for the Young Investigator Program (YIP). This popular program, which is also offered by other Department of Defense (DOD) branches such as the Army Research Office (ARO) and the Office of Naval Research (ONR), provides early career university faculty a path into the Air Force's research enterprise through multi-year research grants. With this program, AFOSR identifies promising young tenure-track faculty who demonstrate the ability to deliver innovative research aligned with AFOSR's research priorities.

Proposals should address research areas outlined in AFOSR's most recent BAA titled "Research Interests of the Air Force Office of Scientific Research." Proposals may be submitted for only one research area. AFOSR's four research areas are:

1. Engineering and Complex Systems (RTA1)
2. Information and Information Networks (RTA2)
3. Physical Sciences (RTB1)
4. Chemistry and Biological Sciences (RTB2)

**Due Dates:** Pre-proposal inquiries and questions must be submitted no later than **April 26, 2019**. Proposals should be submitted no later than **June 3, 2019 at 11:59 EST**. Applicants are strongly encouraged to contact the program officer in their technical area to discuss their research ideas before submitting a proposal. The projected YIP award start date is **January 1, 2020** but is determined at the time of the award.

**Total Funding and Award Size:** Individual awards will be funded at a maximum of \$450,000 for a three-year base period, with a limit of \$150,000 funding annually. AFOSR anticipates making 37 awards in the form of grants, cooperative agreements, or contracts.

**Eligibility and Limitations:** This BAA is open to faculty who have received their PhD on or after April 1, 2012. U.S. institutions of higher education, U.S. nonprofit research organizations, industrial laboratories, and for-profit businesses may submit proposals. Note that AFOSR makes awards to institutions, not individuals. Additional eligibility and submission instructions can be found in the full FOA.

#### *Sources and Additional Information:*

- The full FOA is available at [www.grants.gov](http://www.grants.gov) under solicitation number "FOA-AFRL-AFOSR-2019-0003."
- A complete list of AFOSR research interests and program officers can be found at [www.grants.gov](http://www.grants.gov) under number "FA9550-18-S-0003."

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## **Department of Energy Releases \$52 Million Funding Opportunity for Transportation Fuel Research in Heavy-Duty Vehicles**

On March 1, the Department of Energy's (DOE) Office of Energy Efficiency and Renewable Energy (EERE) released a \$52 million funding opportunity announcement (FOA) entitled "Fiscal Year 2019 Commercial Trucks and Off-Road Applications FOA: Natural Gas, Hydrogen, Biopower, and Electrification Technologies," which will focus on alternative fuels research for heavy-duty vehicles. Though most of the agency's transportation research has focused on light-duty vehicles which comprise the majority of on-road vehicles, medium- and heavy-duty trucks are still responsible for approximately 25 percent of the nation's annual vehicle fuel use, which leaves ample opportunity to explore alternative fuel sources, improve fuel efficiency, and reduce emissions.

This solicitation will integrate activities across EERE's Transportation Offices, including the Vehicle Technologies, Fuel Cell Technologies, and Bioenergy Technologies Offices in an effort to take a more comprehensive approach to identifying opportunities to advance cost-effective, energy efficient fuels for medium- and heavy-duty vehicles. DOE has identified five research areas, some with more targeted subcategories, that explore electrification, natural gas, hydrogen, and other energy sources to address agency and congressional priorities in this space. The topics and subtopics of this solicitation are listed below, but more detailed descriptions of each focus area including deliverables, teaming requirements, general and specific requirements are outlined in the full FOA.

1. Gaseous Fuels Research and Technology Integration for Medium- and Heavy-duty Vehicles
  - a. Research: Advanced Storage for Gaseous Fuels
  - b. Research: Waste-to-Energy
  - c. Technology Integration: Natural Gas Vehicle Maintenance Cost Study
  - d. Technology Integration: Compressed Natural Gas (CNG) Fuel Tank Affordability
  - e. Technology Integration: Smart Compressed Natural Gas (CNG) Refueling
  - f. Technology Integration: Next-Generation Compressed Natural Gas (CNG) Driver Information Systems
2. Battery Electric Heavy-duty Freight Vehicles
3. High Throughput Hydrogen Fueling Technologies for Medium- and Heavy-duty Transportation
4. High-durability, Low Platinum Group Metal (PGM) Membrane Electrode Assemblies (MEAs) for Medium- and Heavy-duty Truck Applications
5. Energy Efficient Commercial Off-road Vehicles

**Deadlines:** The submission deadline for concept papers is **March 29, 2019** while the deadline for full applications is **May 14, 2019**.

**Award Information:** DOE plans to make around 40 awards ranging from \$300,000 to \$5 million, but the number, size, and project period of individual awards will vary substantially based on the area of interest. Full tables outlining the award structure and timeline are included in the full solicitation.

**Cost Share:** The cost share for research universities, institutions of higher learning, and nonprofits ranges from 20 percent to 50 percent based on the topic area. DOE decided not to waive the cost share requirement even though Congress, through Section 108 of H.R. 589, the DOE Research and Innovation

Act, created a two-year pilot program that would have exempted research universities and non-profit organizations from cost-share requirements. DOE will make a decision on a case by case basis on whether to waive the cost-share requirements.

*Sources and Additional Information:*

- A press release announcing the FOA is available at <https://www.energy.gov/articles/department-energy-announces-50-million-commercial-truck-road-vehicle-and-gaseous-fuels>.
- The full solicitation is available at [http://www.lewis-burke.com/sites/default/files/foa\\_2044\\_fy19\\_commercial\\_trucks\\_and\\_off-road\\_applications.pdf](http://www.lewis-burke.com/sites/default/files/foa_2044_fy19_commercial_trucks_and_off-road_applications.pdf).

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### **Department of Defense Releases FY 2020 Multidisciplinary University Research Initiative BAA**

On March 1, the Department of Defense (DOD) released the broad agency announcement (BAA) for the fiscal year (FY) 2020 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.

This year's 26 topics are provided from the Navy, Army, and Air Force basic research offices. Of note, the Office of Naval Research has two more topics than last year. FY 2020 MURI topics include:

#### **Office of Naval Research (ONR)**

- 1) Stimuli-Responsive Materials based on Triggered Polymer Depolymerization
- 2) Quantum Benefits without Quantum Fragility: The Classical Entanglement of Light
- 3) Mathematical Methods for Deep Learning
- 4) Spin and Orbital Angular Momentum (SAM & OAM)
- 5) Photonic High-Order Topological Insulators (PHOTIs)
- 6) Active Topological Mechanical Metamaterials
- 7) Harvesting Oxygen from the Ocean
- 8) Exploring Oxidation and Surface Phenomena of Multi-Principal Element Alloys
- 9) The Physics of High-Speed Multiphase-flow / Material Interactions
- 10) Combining Disparate Environmental Data Into a Common Framework

#### **Army Research Office (ARO)**

- 11) Adaptive and Adversarial Machine Learning
- 12) Axion Electrodynamics beyond Maxwell's Equations
- 13) Engineering Endosymbionts to Produce Novel Functional Materials
- 14) Information Exchange Network Dynamics

- 15) Mathematical Intelligence: Machines with More Fundamental Capabilities
- 16) Quantum State Engineering for Enhanced Metrology
- 17) Solution Electrochemistry without Electrodes
- 18) Stimuli-Responsive Mechanical Metamaterials

**Air Force Office of Scientific Research (AFOSR)**

- 19) Machine Learning and Physics-Based Modeling and Simulation
- 20) Fundamental Design Principles for Engineering Orthogonal Liquid-Liquid Phase Separations in Living Cells
- 21) Modeling, Prediction, and Mitigation of Rare and Extreme Events in Complex Physical Systems Topic
- 22) Fundamental Limits of Controllable Waveform Diversity at High Power
- 23) Full Quantum State Control at Single Molecule Levels
- 24) Constructive Mathematics and Its Synthetic Concepts from Type Theory
- 25) Weyl Fermion Optoelectronics
- 26) Mechanisms of Ice Nucleation and Anti-Icing Constructs

Similar to previous years, topics centered on materials, quantum sciences (one in each service), and neuroscience are presented with less emphasis on biology/bio-inspired basic research. Like last year's BAA, there is a continued emphasis by all three Services on mathematical models and computational approaches to provide theory and understanding to complex physical processes as well as fundamentals for machine learning and artificial intelligence (new). Topics in chemistry by all three Services and physics by the Air Force are new for FY 2020.

DOD encourages faculty to engage with the Research Topic Chiefs assigned to each topic area (see section II.I) 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.

**Letters of Intent:** Not required. Prospective awardees are encouraged to submit white papers to minimize the labor and cost associated with the production of detailed full proposals.

**Timeline for Submission:**

- Questions regarding white papers are due on **May 24, 2019**
- White papers are due on **June 3, 2019, at 11:59 PM ET**
- Notification of evaluations of white papers will be on **June 19, 2019**
- Questions regarding full proposals are due by **August 30, 2019**
- Full proposals are due on **September 13, 2019, at 11:59 PM ET**
- Notification of selection for awards will be made on **February 1, 2020**
- Grants will start on **May 1, 2020**

**Total Funding and Award Size:** DOD expects \$180 million to be made available, pending out-year appropriations. Individual awards are expected to be \$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, mathematics, 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 2020 MURI solicitation issued by each military Service is available at [www.grants.gov](http://www.grants.gov) by searching “N00014-19-S-F005” (Navy), “W911NF-19-S-0008” (Army), and “# FOA-AFRL-AFOSR-2019-0002” (Air Force).
- Additional information on MURI and DOD’s basic research efforts is available at <http://basicresearch.defense.gov/programs-workshops/>.

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### **Federal Aviation Administration Releases New Rules for Unmanned Aircraft Systems**

Last month, the Federal Aviation Administration (FAA) released a proposed rule and an advanced notice of proposed rulemaking (ANPRM) regarding the integration of unmanned aircraft systems (UAS) into the national airspace (NAS). These rules, though not directed to UAS research, impact the operation of UAS for research and other applied uses, such as agriculture, weather surveillance, media, infrastructure, etc. As universities continue to consider what role UAS can or should play on their campuses, the rulemaking process is a valuable opportunity to submit input. Lewis-Burke is awaiting guidance from the FAA on how these rules will interact with Special Rule for Research and Development outlined in the recent FAA Reauthorization and will follow-up with additional information.

Presently, to fly a small UAS system over people or at night, such as using a drone to film a crowd at a football game or monitoring crops, any operator requires a waiver from the FAA. The proposed rule would allow routine operation of small UAS over people or at night without waivers or exemptions, based on specific size and weight specifications. It would also make changes to the certification process. **Comments are due by April 15.** More information on this proposed rule can be found at <https://www.federalregister.gov/documents/2019/02/13/2019-00732/operation-of-small-unmanned-aircraft-systems-over-people>.

A far more general opportunity to provide feedback, the ANPRM is intended to gather information on how the FAA should approach regulation and rulemaking efforts in the future as it pertains to UAS integration. This is a chance for universities to provide input on how UAS should or should not be used in and around their campus. The FAA is interested in topics such as public safety concerns; stand-off distances; altitude, airspeed and performance limitations; Unmanned Traffic Management (UTM);

payload restrictions; and/or design requirements. The comments may result in multiple rulemaking proposals. As universities continue to consider what role UAS can or should play on their campuses, this is an opportunity to submit input and shape the future regulatory posture. **Comments are due by April 15.** The ANPRM can be found at <https://www.federalregister.gov/documents/2019/02/13/2019-00758/safe-and-secure-operations-of-small-unmanned-aircraft-systems>.

Lastly, of interest to all operators on campus, researchers, staff, or recreationists, the FAA released an interim final rule that would require all small UAS to display the unique identifier assigned by the FAA upon the completion of the registration of aircraft on the external surface of the aircraft. The interim final rule went into effect on February 25. **The FAA will accept comments on this rule until March 15.** The interim final rule can be found at <https://www.federalregister.gov/documents/2019/02/13/2019-00765/external-marking-requirement-for-small-unmanned-aircraft>.

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