



**COALITION FOR NATIONAL SECURITY RESEARCH**

The Coalition for National Security Research (CNSR) is a broad-based alliance of industry, academia, scientific and professional organizations, and non-profits committed to advocating for a strong Defense Science and Technology enterprise.

November 27, 2018

The Honorable James N. Mattis  
Secretary of Defense  
U.S. Department of Defense  
1400 Defense Pentagon  
Washington, DC 20301

The Honorable Mick Mulvaney  
Director  
The Office of Management and Budget  
725 17<sup>th</sup> Street NW  
Washington, DC 20503

Dear Secretary Mattis and Director Mulvaney,

As you continue developing the fiscal year (FY) 2020 U.S. Department of Defense (DOD) budget request, the Coalition for National Security Research (CNSR), representing the undersigned members of industry, academia, scientific and professional organizations, and non-profits, respectfully requests you include robust and sustained growth in the DOD's basic research and science and technology (S&T) program budgets.

As described in the National Defense Strategy (NDS), our competitive military advantage is eroding, and "We cannot expect success fighting tomorrow's conflicts with yesterday's weapons or equipment." The mission of the Defense S&T program is to create new technologies that enable future weapons and equipment capabilities providing the U.S. military with a competitive advantage over adversaries. For decades, investments in the Defense S&T program, including the defense basic research programs, have enabled scientific breakthroughs that gave the warfighter new capabilities needed to deter and succeed in conflicts.

For FY 2020, CNSR is concerned about the effects on funding for the Defense S&T program given President Trump's request to reduce the topline Defense budget by \$33 billion. Adjusting for inflation, Defense S&T funding declined approximately 6.8 percent from FY 2005 to FY 2019 enacted. CNSR joins the Defense Science Board, Council on Competitiveness, and National Academies in supporting Defense S&T funding that comprises 3 percent of the overall defense budget with defense basic research comprising at least 20 percent of the S&T budget. Based on FY 2019 enacted levels, the Defense S&T program is more than \$2.1 billion below the recommended levels, and the defense basic research programs are at least \$590 million underfunded.

***In an effort to begin to reach recommended funding levels, we urge you to include at least a 4 percent increase over enacted levels in the Defense S&T program including the defense basic research programs in the FY 2020 budget request, as is called for in [Innovation: An American Imperative](#), which the CEOs of Northrop Grumman, Lockheed Martin, Boeing, and Microsoft all signed and is endorsed by over 500 other leading organizations from industry, academia, and science and engineering.***

A 4 percent increase over enacted levels will help stem the tide of declining Defense S&T funding relative to inflation and begin to address funding challenges facing the basic research

*The Coalition for National Security Research (CNSR) is a broad-based alliance of industry, academia, scientific and professional organizations, and non-profits committed to advocating for a strong Defense Science & Technology enterprise.*

*To learn more or to contact us, please visit <https://cnsr4research.org> or email [cnsr.dodresearch@gmail.com](mailto:cnsr.dodresearch@gmail.com).*

programs such as the Multidisciplinary University Research Initiative (MURI) programs. The outcomes from MURI-sponsored research regularly produce revolutionary new military technologies, including nanotechnology, military drones, biological detection capabilities, materials for armor and force protection, sensors for stealth detection, and various innovations in semiconductors. However, from FY 2013 to FY 2018, on average, only approximately 20 MURI proposals were funded annually. Furthermore, it is our understanding that the MURI programs do not have sufficient resources to increase investments in scientific research needed for the Department's top technological priorities, namely directed energy, artificial intelligence, and hypersonics.

CNSR also strongly believes that to meet the NDS goal of having an unmatched 21st century national security innovation base, it is absolutely critical to invest in research and development to enhance our manufacturing capabilities and workforce. Our national security is enhanced when we invest in education and training programs aimed at building the next generation of our science and engineering workforce and supporting innovative efforts to overcome challenges facing the national security innovation base. As a result, we also urge you to include robust funding in the FY 2020 budget request for the National Defense Education Program (NDEP), Defense-Wide Manufacturing S&T Program, and Manufacturing Engineering Education Program (MEEP).

NDEP has provided support to approximately 2,400 students since FY 2005 with more than 1,300 past participants now working as civilian employees at DOD. MEEP recently announced its first awards to strengthen manufacturing education from high school through graduate education, develop comprehensive apprenticeship training programs, and launch a series of courses that will include opportunities for additive manufacturing programs. With support from the Defense-Wide Manufacturing S&T Program, the Manufacturing USA institutes have conducted nearly 270 major applied research and development projects of high priority to broad industry sectors including many in the defense industrial base. Continued and robust support for these vital education and training programs will ensure we have the workforce to support DOD's operations and our nation's manufacturing needs.

Thank you for your consideration of our views. If we can be of any assistance as you develop the FY 2020 DOD budget request, please do not hesitate to contact us at [cnsr.dodresearch@gmail.com](mailto:cnsr.dodresearch@gmail.com) or by visiting <https://cnsr4research.org>.

Sincerely,

Aerospace Industries Association (AIA)  
American Association for the Advancement of  
Science (AAAS)  
American Chemical Society (ACS)  
American Institute for Medical and Biological  
Engineering  
American Mathematical Society (AMS)  
American Psychological Association (APA)  
American Society for Engineering Education  
Arizona State University  
ASME

Association of American Universities (AAU)  
Association of Public and Land-grant Universities  
(APLU)  
Battelle  
Boston University  
Brown University  
California Institute of Technology  
Carnegie Mellon University  
Columbia University  
Computing Research Association  
Consortium for Ocean Leadership

Cornell University	University of Houston
Duke University	University of Illinois System
Energetics, Inc.	University of Iowa
Federation of Materials Societies	University of Maryland at College Park
Florida International University	University of Michigan
Florida State University	University of Missouri System
George Mason University	University of Nebraska
Georgia Institute of Technology	University of North Carolina – Chapel Hill
Harvard University	University of North Carolina System
IEEE-USA	University of Pennsylvania
Indiana University	University of Pittsburgh
Lehigh University	University of Rhode Island
Louisiana State University	University of Rochester
Louisiana Tech University	University of South Florida
Massachusetts Institute of Technology	University of Southern California
Materials Research Society	University of Tennessee
Michigan State University	University of Texas System
Michigan Technological University	University of Virginia
New Mexico State University	University of Washington
Northern Illinois University	University of Wisconsin - Madison
Northwestern University	Vanderbilt University
Oak Ridge Associated Universities	Virginia Commonwealth University
Ohio State University	Washington State University
Oregon Health and Sciences University	West Virginia University
Oregon State University	William & Mary
Pace University	Woods Hole Oceanographic Institution
Penn State University	Yale University
Princeton University	
Purdue University	
Rensselaer Polytechnic Institute	
Rutgers, The State University of New Jersey	
Scripps Institution of Oceanography	
Semiconductor Industry Association	
Society for Industrial and Applied Mathematics	
SPIE, the international society for optics and photonics	
SRI International	
Temple University	
Texas A&M University	
The Catholic University of America	
The George Washington University	
The Johns Hopkins University	
The Optical Society	
The State University of New York	
University of Arizona	
University of California – Irvine	
University of California – Los Angeles	
University of California - Riverside	
University of California – San Diego	
University of California System	
University of Central Florida	
University of Cincinnati	
University of Colorado Boulder	
University of Delaware	
University of Florida	