ONR Recognizes 2019 Young Investigators

ARLINGTON, Va. – The Office of Naval Research (ONR) recognized 25 awardees of the 2019 Young Investigator Program (YIP) Dec. 17. These recipients will share $16.5 million in funding to conduct naval-relevant scientific research with direct benefits for Sailors and Marines.

“To meet the demand signal from the National Defense Strategy, we must attract the best and brightest minds to work on naval warfighting challenges. The Young Investigator Program does just that, and I’m honored to announce the recipients for 2019,” said Chief of Naval Research Rear Adm. David Hahn. “Since 1985, this program has attracted outstanding scientists and engineers from across academia to support our Navy and Marine Corps – and in this era of great power competition, that is more important than ever before.”

The ONR YIP is a highly competitive program in which academic achievements and potential for scientific breakthroughs are major factors in the evaluation process. The winning candidates were selected from more than 260 applicants – all of whom are college and university faculty and obtained a PhD within the past seven years.

Awardees represent 23 academic institutions nationwide, supporting efforts related to aerodynamics, autonomy, energetics, power and energy, machine learning, sensing and sensors, quantum materials and undersea-breathing technologies. The YIP awards support laboratory equipment, graduate student stipends and scholarships, as well as other expenses critical to ongoing and planned research. Typical grants range between $500,000 to $750,000 over a three-year period.

Established in 1985, the ONR YIP is one of the nation's oldest and most selective basic research early career awards in science and technology. Its purpose is to fund tenure-track academic researchers, or equivalent, whose scientific pursuits show outstanding promise for supporting the Department of Defense, while also promoting their professional development.

Navy Marks Establishment of the First CMV-22B Squadron

SAN DIEGO – The Navy held a ceremony Dec. 14 at Naval Base Coronado to commemorate the establishment of Fleet Logistics Multi-Mission Squadron (VRM) 30, the Navy's first CMV-22B squadron, commander, Naval Air Forces Public Affairs, said in a release.

VRM-30 was established to begin the Navy's transition from the C-2A Greyhound, which has provided logistics support to aircraft carriers for four decades, to the CMV-22B, which has an increased operational range, greater cargo capacity, faster cargo loading/unloading, increased survivability and enhanced beyond-line-of-sight communications compared to the C-2A.

"Where no instructions existed, no patch existed, no 'here's how we are going to perform our duties everyday' existed, this team will define that. And it's exciting because we can establish right off the bat those best practices," said Vice Adm. DeWolfe H. Miller III, commander, Naval Air Forces. "This platform is our future and when you look at the nature of the future fight, we need that versatility, that flexibility that's going to be provided in every subsequent squadron that transitions."

The first CMV-22B aircraft are scheduled to be delivered to the squadron in fiscal 2020. While VRM-30 awaits the arrival of the CMV-22B, Navy pilots and maintainers will train with the U.S. Marine Corps, which has flown the MV-22 since 2007. As the C-2A squadrons stand down, their pilots and aircrew will transition to the CMV-22B. The final C-2A squadron is scheduled to stand down in 2024.

The CMV-22B is the U.S. Navy version of the V-22 Osprey tiltrotor aircraft.

Littoral Combat Ship St. Louis Christened and Launched

MARINETTE, Wis. – The Lockheed Martin-led shipbuilding team launched littoral combat ship (LCS) 19, the future USS St. Louis, into the Menominee River at the Fincantieri Marinette Marine Shipyard. Ship sponsor Barbara Broadhurst Taylor, the daughter of a decorated World War II aviator, christened LCS 19 just prior to launch.

“LCS 19 is the second ship we’ve christened and launched this year,” said Joe DePietro, Lockheed Martin vice president and general manager of Small Combatants and Ship Systems. “Our shipbuilding team has truly hit its stride. We completed trials on three ships and delivered two more. Once delivered to the Navy, LCS 19 will be on its way to independently completing targeted missions around the world. We remain focused on delivering these affordable ships to the fleet as quickly as possible and increasing capability with each hull.”

The Freedom-variant LCS integrates new technology and capability to affordably support current and future missions

from deep water to the littorals. LCS is a highly maneuverable, lethal and adaptable ship, designed to support focused mine countermeasures, anti-submarine warfare and surface warfare missions. LCS 19 is targeted to support the mine countermeasures mission.

Lockheed Martin is in full-rate production and has delivered seven ships to the U.S. Navy. There are seven ships in various stages of production and test at Fincantieri Marinette Marine. This year, the Lockheed Martin-led team began construction on two ships, delivered two ships, completed sea trials for three ships and saw one delivered ship commissioned. LCS 13, the future USS Wichita, is slated for commissioning in Mayport, Florida, on Jan. 12.

“I am thrilled and very honored to be the sponsor of the future USS St. Louis. The combination of my family’s military background and the enduring spirit of the great city of St. Louis make this incredibly meaningful,” Taylor said. “This is the seventh ship to bear the name St. Louis, and I know that the people of our great city are extremely proud that this distinguished legacy will continue.”

“We are proud to be building LCS 19 and her sister ships at the heartland’s only naval shipyard,” said Jan Allman, Fincantieri Marinette Marine president and CEO. “Today’s launch and christening is a testament to the hard work of more than 2,000 workers who pass through the shipyard’s gates, put on their hard hats and build American warships.”

Comfort Returning to Norfolk

After Completing Mission in South and Central America

NORFOLK, Va. – The U.S. Navy hospital ship USNS Comfort is scheduled to return to Naval Station Norfolk Dec. 18, after completing a deployment to South and Central America, Military Sealift Command announced in a Dec. 14 release.

Returning to Norfolk signifies the conclusion of Comfort's 11-week medical support mission to the region as part of U.S. Southern Command's Operation Enduring Promise initiative.

Comfort's embarked medical team worked with health and government partners in Ecuador, Peru, Colombia and Honduras, providing care both aboard the ship and at land-based medical sites, helping to relieve pressure on national medical systems caused partially by an increase in cross-border migrants. The deployment reflected the United States' enduring promise of friendship, partnership and solidarity with the Americas.

The ship's crew included more than 465 U.S. and partner nation military doctors, nurses and corpsmen. In addition, about 90 medical and dental professional volunteers from nongovernmental organizations were aboard to support the medical assistance mission. The mission was supported by a team of civil service mariners who oversaw the ship's operation and navigation. During the mission, Comfort visited Esmeraldas, Ecuador, Paita, Peru, Turbo, Colombia, Riohacha, Colombia, and Trujillo, Honduras.

Health services provided during Comfort's deployment included general surgery, ophthalmologic surgery, dermatology, medical evaluation and treatment, preventive medicine, dental screenings and treatment, optometry screenings, eyewear distribution, and general public health. Medical capabilities aboard the hospital ship include surgical and post-surgical

rooms, a CAT-scan unit, four X-ray machines, a dental suite, an optometry lab, a physical therapy area, two oxygen-producing plants and a 5,000-unit blood bank.

During the port visits, Comfort’s medical team treated over 26,000 patients and conducted approximately 600 surgeries to include cataracts, hernias, cleft palates and more. Additionally, Comfort hosted approximately 1,000 distinguished visitors and guests during 53 distinguished visitor and media days to include the president of Honduras and prime minister of Peru.

Comfort’s Enduring Promise mission demonstrated U.S commitment to the Americas and is part of a continuum of support provided by U.S. Southern Command (SOUTHCOM). SOUTHCOM-sponsored civic assistance and humanitarian missions were conducted in close cooperation with partner nations in the region as well as with U.S. interagency partners at the U.S. Department of State and USAID. Similar missions include Continuing Promise, New Horizons, Beyond the Horizon, medical readiness training exercises and the Medical Civil Action Program.

This mission marked the sixth time the hospital ship has provided medical assistance in the region. Since first deploying to the region on a similar mission more than a decade ago, the hospital ship has visited 18 nations in the Caribbean, Central America, and South America. During those missions, military medical professionals worked with host nation and civilian

partners to provide medical treatment to nearly 390,000 people, including more than 6,000 surgeries.

Strike Fighter Squadron 147 Declared Safe for Flight Operations

PACIFIC OCEAN –The “Argonauts” of Strike Fighter Squadron (VFA) 147 completed their carrier qualifications Dec. 12 aboard USS Carl Vinson, the final required component for Commander, Joint Strike Fighter Wing, to issue the squadron its safe-for-flight-operations certification. This marks a major milestone for the U.S. Navy toward declaring initial operating capability next year.

The safe-for-flight operations certification is the final step for VFA-147’s transition from the F/A-18E Super Hornet to the F-35C Lightning II. This process ensures a squadron is manned with qualified personnel to implement maintenance and safety programs in support of fleet operations. All transitioning squadrons are required to complete this certification prior to independently conducting flight operations.

When introducing a new aircraft to the fleet, the appropriate fleet replacement squadron (FRS) is assigned oversight responsibility for the transitioning unit. The VFA-125 “Rough Raiders” were reactivated in January 2017 to fulfill the appropriate FRS role for the Lightning II. Since completing its combat deployment last winter, VFA-147 has been working with the Rough Raiders to accomplish the safe-for-flight-operations certification. The Argonauts will be able to operate independently from the Rough Raiders, having received safe-for-flight-operations certification.

“Since we returned from deployment last December, our team has been driving toward fully bringing this platform online for the Navy,” said VFA-147 Commanding Officer Cmdr. Patrick Corrigan. “As the Argonauts close out 2018 and the final

stages of our safe-for-flight certification, we continue to exhibit the relentless drive required to meet transition goals and milestones. With this certification, we are announcing that we have the right skills, training and people to take this mission and execute it, to its fullest potential."

The safe-for-flight-operations certification encompasses areas such as equipment, personnel and programs. Not least among them is the requirement for the squadron to be in the physical custody of at least 30 percent of the assigned aircraft. Other requirements include the installation and operation of management information systems such as Autonomic Logistics Information System and its accompanying support networks. There is also a requirement for operational F-35C squadrons to maintain robust, on-track maintenance programs, as well as complete various inspections ranging from weapons to safety. Aircrew complete a transition flight syllabus and maintain certain proficiencies in accordance with Naval Air Training and Operating Procedures and Standardization.

"The Argonauts' safe-for-flight operations certification was earned through the herculean effort of squadron Sailors and is an acknowledgement that they have developed the skills to safely maintain and operate the F-35C Lightning II," said Joint Strike Fighter Wing Commander Capt. Max McCoy. "We eagerly look forward to declaring IOC and integrating the F-35C into the carrier strike group. This aircraft is a key component to maintaining the U.S. Navy's dominance anywhere in the world."

"VFA-147 continues to accomplish significant milestones, advancing this program closer to its ultimate goal of integrating the F-35C into the fleet," said McCoy. "The exceptional performance of the squadron throughout the entire transition process is a testament to the hard-working Sailors who make the U.S. Navy F-35C program a reality. We will succeed because the professionals in this program will not let it fail. It is evident in all that they do. It is who we are

as a team.”

Commander, Joint Strike Fighter Wing, headquartered at Naval Air Station Lemoore, California, ensures that each F-35C squadron is fully combat-ready to conduct carrier-based, all-weather, attack, fighter and support missions for Commander, Naval Air Forces. With its stealth technology, advanced sensors, weapons capacity and range, the F-35C will be the first fifth-generation aircraft operated from an aircraft carrier. The Navy F-35C program is scheduled to declare initial operating capability by the end of February.

Navy Announces Findings on Sinking of World War I Cruiser USS San Diego

WASHINGTON – The Navy announced its findings Dec. 11 after a two-year study into what sank the World War I cruiser USS San Diego (ACR 6).

Alexis Catsambis, Ph.D., of the Naval History and Heritage Command’s Underwater Archeology Branch, based at the Washington Navy Yard, led the project and chaired a panel discussion for media at the American Geophysical Union’s (AGU) Fall Meeting. Although the original court of inquiry believed the explosion that sank the 500-foot armored cruiser was caused by a mine, later speculation raised the theory that it might have been a torpedo.

After examining new survey data, additional archival research, computer impact and flooding models, the area of the ocean floor in which the wreck rests, and other elements related to

the ship’s loss, Catsambis announced that research team believed the explosion’s cause was a mine. In fact, they believe it was one of two types of mines laid by German submarine U-156.

“The legacy of the incident is that six men lost their lives on July 18, 1918,” Catsambis said. “With this project we had an opportunity to set the story straight and by doing so, honor their memory and also validate the fact that the men onboard did everything right in the lead up to the attack as well as in the response. The fact that we lost six men out of upwards of 1,100 is a testament to how well they responded to the attack.”

In addition to Catsambis, the panel participants included Ken Nahshon, Ph.D., of the Naval Surface Warfare Center Carderock Division in Bethesda, Maryland, and Arthur Trembanis, Ph.D., from the University of Delaware in Newark, Delaware.

The 15,000-ton armored cruiser San Diego sank off Long Island, New York, losing six sailors from a crew of 1,100. German submarines had mined the coast, implicating a mine. But the ship’s captain was perplexed that the explosion occurred aft of the ship’s widest point, which gave rise to the notion the explosion might have been caused by a torpedo even though no submarine or torpedo trail had been spotted.

Later theories suggested a coal bunker explosion or sabotage, but the source of the explosion remained a mystery.

During the presentation, the scientists detailed how each of their teams used historical analysis, archaeological research, site investigation, and impact and flood modeling to eliminate other possibilities that might have caused San Diego’s sinking such as sabotage, accident or enemy torpedo.

Trembanis explained how the use of underwater robotics and remotely deployed instruments including an autonomous underwater vehicle allowed researchers to collect high-

resolution 3D images of the site to support their conclusion.

“The format of the 3D modeling data makes analysis readily comparable,” said Nahshon. “Before we started this, I wasn’t familiar with the ability to do this underwater; above the water we do it all the time, but below water collecting 3D data is a challenge. I’ve learned that the sheer amount of expertise that’s needed to interpret it is a credit to the advances of technology in sea floor mapping.”

Before taking questions, Catsambis shared why this research is important for the U.S. Navy and how learning from the past will help to prepare for the future.

“The collection of archeological and hydrographic data establishes a baseline informing site formation processes and management of USS San Diego,” said Catsambis. “Lessons learned here are applicable to other U.S. Navy sunken military craft. This endeavor also provided real-world training opportunities for U.S. Navy divers, archaeologists, historians, modelers, naval engineers and graduate students.”

To commemorate the 100th anniversary of the loss of San Diego, the only major U.S. warship sunk in World War I, a multipartner investigative campaign dubbed the USS San Diego Project was launched in 2017; mapping the wreck, assessing the wreck’s state of preservation, modeling its sinking, and uncovering the weapon that likely sank it.

Dive training at the site occurred in August 2016 and June 2017, with the site investigation commencing September 2017, followed by the commemoration and diver survey July 2018. A major goal of the project is to raise awareness of the importance of preserving the wreck site into the future.

USS Thomas Hudner Brought to Life in Boston

BOSTON – The Navy commissioned its newest surface combatant, USS Thomas Hudner (DDG 116), during a Dec. 1 ceremony, the commander, Naval Surface Force, U.S. Pacific Fleet Public Affairs said in a release.

USS Thomas Hudner, commanded by Cmdr. Nathan Scherry, is the 66th Arleigh Burke-class destroyer, and the 36th DDG 51-class destroyer built by General Dynamics Bath Iron Works (BIW). It is the first warship named for naval aviator and Medal of Honor recipient Capt. Thomas J. Hudner, Jr.

Hudner, a native of Fall River, Massachusetts, received the Medal of Honor for his heroic actions during the Battle of the Chosin Reservoir in 1950. Hudner crash-landed his plane in a selfless effort to save the life of his wingman and friend, Ensign Jesse Brown, the Navy's first African American aircraft carrier qualified naval aviator.

Among the distinguished guests and speakers at the commissioning, Thomas Hudner III, son of Capt. Hudner, gave a speech about his father's life and legacy.

"While many would say that my father's actions were an extraordinary act, my father never thought of himself or that action as extraordinary," said Hudner. "To the contrary, when he was asked through the years why he did what he did, he responded simply that it was the right thing to do and if he hadn't acted, someone else would have. Throughout military history there have been countless acts of unselfish heroism, in fact the history of the United States has been built upon these acts many of which went unseen and without recognition. However, it was Capt. Hudner's unselfish act in the service of his country, the United States Navy, and his friend and

squadron mate that lives in the spirit of this ship."

Massachusetts Gov. Charlie Baker delivered the principal address at the ceremony, which was attended by Chairman of the Joint Chiefs of Staff Gen. Joseph Dunford, Secretary of the Navy Richard V. Spencer, Mayor of Boston Martin Walsh, Vice Chief of Naval Operations Adm. William Moran, U.S. Rep. Stephen Lynch, D-Mass., and others.

"Simply put, life was never about Tom Hudner," said Baker. "He was the consummate team player. The only way a person would know anything about what took place on that mountain top during the Korean War would have been to hear from someone else or to have read about it because he never talked about that day. It is my fervent hope that this ship is imbued with the humility, selflessness, patriotism, the commitment to one another, the kindness and decency that transcends our differences that made Tom so special."

The ship's sponsors, Georgea Hudner, wife of Capt. Hudner, and Barbara Miller, former co-chair of the Flag Officer Spouse Training, gave the traditional order to "Man this ship and bring her to life," signaling the Sailors to embark and officially begin service as a U.S. Navy ship.

For the ship's crew, the day was the culmination of a few years of work to get USS Thomas Hudner prepared for commissioning. The day was a special opportunity to bring the ship to life in Boston, where the legacies of great ships and great people are kept and revered.

Next, the ship will make its way to homeport in Mayport, Florida.

Navy Accepts Final Component for LCS Anti-Submarine Warfare Mission Package

FORT PIERCE, Fla. – The Navy took delivery of the final component of the littoral combat ship (LCS) Anti-Submarine Warfare (ASW) Mission Package Nov. 30, following the successful completion of a rigorous acceptance test regime at the Harbor Branch Oceanographic Institute, Program Executive Office, Unmanned and Small Combatants (PEO USC), Public Affairs said in a Dec. 4 release.

The Raytheon-developed Dual-mode Array Transmitter (DART) Mission System and ASW Mission Package will significantly increase ASW capabilities within the U.S. Navy, bringing the ability to maneuver active and passive sonars above and below the thermocline layer.

"The DART Mission System is an essential component of the LCS ASW Package, and when coupled with the SQQ-89 acoustic processing, the Multi-Function Towed Array and MH-60R helicopter, makes up an ASW MP that will provide revolutionary capabilities to the fleet," said Capt. Ted Zobel, LCS Mission Module program manager.

Sailors attached to USS Fort Worth (LCS 3) Gold Crew, Detachments 1 and 2, have played an integral role in testing and evaluating the DART Mission System. The Sailors participated not only in early testing of the system, but also provided feedback to the manufacturer on the operation and usability of the system.

"LCS Sailors have participated in major testing and evaluation events throughout the development of the DART system," said Senior Chief Sonar Technician (SW) Joseph Hart. "Raytheon's willingness to accept Sailor input as far as what the final

production unit should look like and how it should operate has been exceptional, and has allowed the fleet testing team to ensure the DART system and the full extent of its capabilities will be effectively employed by future LCS crews.

“Tactically, this should be a game changer for the Surface Navy,” said Hart, who is with LCS ASW Detachment 2.

The preproduction test article (PPTA) remained on schedule and met all contractual milestones since the award was made in March 2017.

Following the acceptance of the DART PPTA, the Navy plans to embark the system on a craft of opportunity and proceed to the Atlantic Undersea Test and Evaluation Center for an in-water demonstration of the of the LCS ASW Mission Package’s Escort Mission Module prior to formal developmental testing on USS Fort Worth.

The LCS ASW Mission Package ensures the U.S. Navy will remain dominant in ASW and outpace submarine advances of international competitors.

Navy Must Be ‘Agile’ but ‘Sustainable’ in the Arctic

WASHINGTON — Sustainability is the key issue for U.S. naval operations in the Arctic, a Navy official said.

“The Navy has to be agile [in its Arctic operations],” Jeffrey Barker, a deputy branch head for Policy and Posture in the Office of the Chief of Naval Operations, said Dec. 4 at a forum, The Arctic and National Security, sponsored by the

Woodrow Wilson Center, a Washington think tank. “But we’re not going to do anything unless it is sustainable.

“I see this as a balance of space, time, and force,” Barker said.

Barker said the Navy would respond to any combatant commander requirements to operate more often in the Arctic. He stressed that the Navy would work closely with the Coast Guard, Air Force and international partners to accomplish assigned missions in the region.

“We can’t do it all our ourselves,” he said.

Barker cited a recent Government Accountability Office report that said that, in his words, “what we are doing aligns with the National Security Strategy. We think we are positioned very, very well.”

Although the recent focus on increasing Arctic operations has been brought about by the changes in the ice coverage of the Arctic Ocean, the Navy has long been a regular operator in the region.

“Most of the missions we do [in the Arctic] we can accomplish with submarines,” he said. “The submarines are up there to deny bastions to the Russians.

Rite-Solutions Selected in $561 Million Navy UUV

Contract

MIDDLETOWN, R.I. – Rite-Solutions recently was selected as one of 23 companies that will participate in a five-year, $561.2 million contract to help the U.S. Navy develop future generations of its Unmanned Undersea Vehicle (UUV) Family of Systems (FoS), the company announced in a Dec. 3 release.

The contract, announced by the Naval Undersea Warfare Center (NUWC) in Newport, Rhode Island, will develop core technologies in 12 functional areas such as payloads, propulsion, power storage and conversion, vehicle control, and command and control.

“We will focus on three areas: software, architecture, and command and control functionality,” said Mike Coffey, executive vice president and general manager at Rite-Solutions. “Our strength is integrating disparate systems into a single, cohesive system of systems.”

Consistent with government contracts, NUWC will release task-order requests for proposal that participating companies will bid on. But unlike contracts that source a finished product (such as a UUV) from a single company, NUWC will receive components from multiple companies.

“This contract is a little unique,” said Coffey. “NUWC is taking a best-of-breed approach to acquiring technologies that will enable them to develop, build and support UUV systems. They will integrate the different technologies in the prototype phases of UUV FoS development, which will establish the baselines for future production.”

Often a subcontractor to large system developers, Rite-Solutions is now a prime contractor alongside them.

“We are pleased to be included on this contract, with some of the biggest and most reputable companies in the aerospace and

defense industry," Coffey said.

Overall, the contract has options that could bring the total amount to $794.5 million.