EDUCATION:

Joint Base Anacostia-Bolling contracting Airman makes Air Force history with Naval Postgraduate School selection

(DVIDS 26 Oct 21) … Airforce Staff Sgt Kayla White

A member of the Joint Base Anacostia-Bolling 11th Contracting Squadron became one of the first two enlisted Airmen to ever be selected to attend Naval Postgraduate School.

ICAEC-CC—Internships—Preparing Students for Science Careers [Video Interview]

(Inside California Education 27 Oct 21)

Meet students who are participating in prestigious science and STEM internships through their community college near Monterey. Naval Postgraduate School Alison Kerr and Andy Nieto speak on internships.

RESEARCH:

Monterey: Naval Postgraduate School launches 5G research with AT&T

(Monterey Herald 28 Oct 21) … Dennis L. Taylor

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Elroy Air’s Series A Financing

(Elroy Air 3 Aug 21)

Elroy Air, the Aerospace and Logistics company developing the world’s first end-to-end autonomous vertical take-off and landing (VTOL) aerial cargo systems, has raised a $40MM Series A financing from Marlinspike Capital, Lockheed Martin Ventures, and Prosperity7 Ventures alongside continued backing from existing investors including Catapult Ventures, DiamondStream Partners, Side X Side Management, Shield Capital Partners and Precursor Ventures. The fresh financing brings Elroy Air’s total investment raised to date to $48MM… “This funding propels us into an exciting new stage of our business,” said David Merrill, CEO of Elroy Air. “We’re going to complete the build of full-capability pre-production aircraft, advance our certification programs, secure key supply chain partnerships, and enter into flight-test operations in collaboration with our partners at the Naval Postgraduate School and the US Air Force. It’s going to be an amazing next phase!”

FACULTY:

Fixing Fraud at For-Profit Colleges

(TheRegReview 30 Oct 21) … Taylor Ross, Katherine Rohde and Caitlin Kim

Scholars advocate enhancing regulations to decrease fraudulent practices used by for-profit schools… Policymakers should increase oversight of for-profit college advertising, argue Stephanie Riegg Cellini of The George Washington University and Latika Hartmann of the Naval Postgraduate School. In a report for
the Brookings Institution, Cellini and Hartmann assess the advertising expenditures of all degree-granting institutions from 2001 to 2017. They report that although for-profit colleges serve just 6 percent of students, they account for over 40 percent of all college advertising dollars. Moreover, for-profit colleges spend four times as much on advertising per student as nonprofits. Cellini and Hartmann call for increased mandatory disclosures on college advertising, recruitment, and marketing expenditures. They also propose stronger enforcement of laws prohibiting misrepresentation.

**DARPA SubT Challenge**
*(Inside Unmanned Systems 1 Nov 21) … Dawn M.K. Zoldi*

As the final event of the Defense Advanced Research Projects Agency (DARPA) Subterranean (SubT) Challenge concluded on Sept. 24, team CERBERUS (CollaborativE walking & flying RoBots for autonomous ExploRation in Underground Settings) stood victorious over seven other global systems competitors, taking home $2 mil- lion in prize money. More importantly, DARPA now stands better equipped to assist warfighters and first responders in safely exploring dangerous, dark or deep underground environments… Tim Chung, Ph.D., program manager of DARPA’s Tactical Technology Office (TTO), led the project. Chung has an extensive background in robotics as a former assistant professor at the Naval Postgraduate School, director of the Advanced Robotic Systems Engineering Laboratory (ARSENL) and prior deputy director of the Secretary of the Navy initiative for the Consortium for Robotics and Unmanned Systems Education and Research (CRUSER). The SubT Challenge, Chung said, was looking for robots that are “the best all-around triathletes,” able to operate in tunnels, urban underground and caves. “In the future, we can imagine reducing risk to the rescuers in those environments if robots could provide timely and critical information.” Not surprisingly, the SubT Challenge scenarios involved urgent (T-minus “minutes”) search and locate missions.

**ALUMNI:**
**Jacqueline Maguire Named Special Agent in Charge of FBI’s Philadelphia Field Office**
*(Tickle The Wire 26 Oct 21) … Steve Neavling*

Jacqueline Maguire has been named special agent in charge of the FBI’s Philadelphia Field Office… Maguire attended Villanova University, where she earned a bachelor’s degree in comprehensive science. At Long Island University, she earned a master’s degree in criminal justice. And at the Naval Postgraduate School, she earned a master’s degree in homeland defense and security.

**Wilson Perumal & Company Promotes Ernie Spence to Principal**
*(PRNewswire 28 Oct 21)*

Wilson Perumal & Company, Inc. (WP&C), a premier strategy and operations consultancy, is pleased to announce the promotion of Ernie Spence to Principal. In his new role, Spence will oversee multiple project teams solving critical issues for C-level clients, and serve as a member of the firm’s leadership team… Spence previously served as Vice President of Operations for Syneexus. Earlier, as a fighter pilot and test pilot in the US Navy, Spence commanded and turned around multiple F/A-18 squadrons, including the largest in the Navy, for which he reduced operations and maintenance costs by 36% in one year. He earned an MS Aeronautical Engineering from the Naval Postgraduate School/U.S. Naval Test Pilot School and an MS National Resource Strategy from the National Defense University, Eisenhower School.

**USS Alaska (SSBN 732) Gold Crew Changes Command**
*(DVIDS 29 Oct 21) … U.S. Navy Lt. Stuart Phillips*

The Gold crew of the Ohio-class ballistic-missile submarine USS Alaska (SSBN 732) held a change of command onboard Naval Submarine Base Kings Bay, Georgia, Oct. 29… Thomas, a native of Ann Arbor, Michigan, graduated with honors from the University of Michigan in 2002 with a degree in nuclear engineering. He later earned a master’s degree in operations research with honors from the Naval Postgraduate School.

**UPCOMING NEWS & EVENTS:**
**November 11:** Veteran’s Day (Federal Holiday)
**November 16-19:** [Center for Executive Education SPEAR Workshop](#)
**November 25:** Thanksgiving Day (Federal Holiday)
Joint Base Anacostia-Bolling contracting Airman makes Air Force history with Naval Postgraduate School selection

A member of the Joint Base Anacostia-Bolling 11th Contracting Squadron became one of the first two enlisted Airmen to ever be selected to attend Naval Postgraduate School.

U.S. Air Force Master Sgt. Kade Forrester, 11th CONS Infrastructure Flight section chief, will travel with his family to attend the 18-month Acquisitions and Contract Management program in Monterey, California.

“It is nerve-racking but exciting at the same time,” said Forrester. “It is a lot of pressure being the first. If you do well, you set the standard for everyone to follow. If you fail, you might ruin the opportunity for those who might want to follow you. It is a lot of pressure to represent the enlisted field.”

Forrester described the sacrifice it took to get him to this point, saying it required a lot of long days and nights.

“It was worth it for everyone, from the junior enlisted below me to my leadership above me, who helped make this possible,” he said. “It is absolutely great knowing they have that trust and confidence in me and that they would push and advocate for me to have this opportunity.”

11th CONS Commander Maj. Ruben Arredondo highlighted Forrester’s contributions in the year since he joined the unit.

“He was one of the first enlisted members to arrive and quickly joined us as we began the process of standing up our squadron,” said Arredondo. “His impact was immediate as he drove the standup of our construction flight, JBAB’s government purchase card program, and aided the Air Force’s largest end-of-year mission growth! These efforts garnered him the 11th Wing’s first (senior noncommissioned officer) of the quarter award. Since then, he’s continued to lead the way for his peers, continuing his professional development and assisting mission partners every step of the way.”

Forrester’s 11th Wing accomplishments include earning a nomination into the Senior Leader Enlisted Commissioning Program and the wing’s nominee for the 2021 Lance P. Sijan SNCO award. His greater Air Force accomplishments include being selected by the Air Force Contracting Chief Enlisted Manager to attend the University of North Carolina Executive Development Course and being recognized as an Outstanding Volunteer for the 2021 Air Force Contracting Symposium.

JBAB and 11th Wing Commander Col. Cat Logan said that it is bittersweet to see Forrester go.

“You can’t hold onto talent,” she said. “We are able to accomplish significant feats here every day because of Kade and people like him. It’s important that we foster that talent and let him move onto the next level. He has proven that the sky is the limit for all of us.”

The highly competitive slots at NPS have historically gone to commissioned officers. Forrester’s acceptance into the NPS program signify a trail blazed and a glass ceiling shattered.

“The Air Force thrives on innovation, and our enlisted members have always been at the heart of that,” said Chief Master Sgt. Dennis Carr, the contracting career field manager and chief of enlisted policy. “Master Sergeant Forrester has a consistently strong record of performance that clearly put him among the best candidates for this opportunity. He has also sought out opportunities to challenge himself and has embraced growing as a leader and functional expert.”

Enlisted members attending NPS will be able to embrace the Air Force Contracting mindset of mission-focused business leadership and combine their academics and experiences with what they already know as senior noncommissioned officers.

“The leadership of Air Force Contracting believes that combining our innovative spirit as enlisted members with high levels of education and development make for a truly remarkable Airman able to take on the toughest challenges facing our Air Force,” said Carr. “When they come back to the Air Force, they are going to be placed into positions where they can bring this amazing experience to bear on some of our most complex projects and problems.”
Forrester will learn to apply advanced management and operations research techniques to defense problems. This includes policy formulation and execution, strategic planning, defense resource allocation, cost-benefit and cost-effectiveness analysis, federal fiscal policy, computer-based information and decision support systems, and complex managerial situations requiring comprehensive integrated decision making.

“Most of our training is tiered toward this type of contracting,” said Forrester. “This is the more exciting side of contracting that enlisted members don’t usually get to touch.”

He will also gain a deeper understanding of and will be able to apply the principles and fundamentals of acquisition and contracting within the federal government. He will enhance his ability apply innovative and creative approaches not only to resolve difficult issues, but also to significantly influence the legal and regulatory structure within which acquisition decision making occurs.

Finally, the graduate will develop his ability to conceptualize, develop and execute strategic business alliances and relationships necessary to the successful acquisition of goods and services. Forrester urged his fellow Airmen to pursue and seize these kinds of opportunities.

“Regardless of why you joined, the Air Force provides a lot,” he said. “You never know where your career might take you. Take advantage of every opportunity and also set your people up for success. When we develop ourselves, we better the Air Force.”


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Meet students who are participating in prestigious science and STEM internships through their community college near Monterey. Naval Postgraduate School Alison Kerr and Andy Nieto speak on internships.

ICAE-CC—Internships—Preparing Students for Science Careers — MONTEREY COUNTY, CA 05:18 — InsideCalEd Video Gallery

EPISODE ICAE-CC407: Teaching Zoo — Tiny Homes — Internships — Repairing and Building Planes 26:46 — InsideCalEd Video Gallery [Full Episode]

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RESEARCH:

Monterey: Naval Postgraduate School launches 5G research with AT&T

Monterey Herald 28 Oct 21

New research being conducted at Monterey’s Naval Postgraduate School with AT&T hopes to take lauded 5G communications technology into potential warfighting scenarios that can deliver critical real-time data transmissions at a cost-effective price tag.

The research on fifth-generation wireless is being conducted at NPS’ Sea Land Air Military Research facility on the seaward side of the main NPS campus. The Navy hopes the research will lead to greater national defense capabilities, benefit intelligence gathering and help industries like shipping and even recreational boating.

In a statement, retired Vice Adm. Ann Rondeau, president of NPS, said the collaboration between NPS and AT&T will combine the real-world experience of NPS graduate students with developing technology from the wireless carrier.
“Innovation occurs at the seams and intersections of practice and expertise, and NPS provides an innovation hub where applied 5G research can occur,” Rondeau said. “AT&T’s experience with the existing 5G infrastructure on the Monterey Peninsula will facilitate our collaboration on the next generation of mobile networks.”

The research involves what’s called “edge computing,” where computational tasks are moved to a particular device instead of being executed on a distant server or “in the cloud.” For example, a smartphone may have facial recognition capabilities that are embedded in the phone rather than on a separate server. Edge computing provides for shorter wait times — called lower latency — from when a user executes a command, say to send a text message, and when the phone actually transmits the text.

The speed of the technology is especially valuable with real-time transmissions, as it cuts the latency to milliseconds.

Edge computing also provides for improved cybersecurity protections, something important to both the military and industry. The reason 5G technology is becoming an important tool to the military and industrial enterprises is because it is designed to deal with moving lots of data very fast with little interruption.

“This high bandwidth, low latency capability means that a swarm of drones can share information in near real-time to execute missions,” said Ray Buettner, an associate professor of information science at NPS. Buettner is also the NPS director of field experimentation, the director of the Consortium for Robotics and Unmanned Systems Education and Research and the director of the Advanced Robotics Systems Engineering Laboratory.

In a battlespace, the military assumes that their adversaries will try to isolate forward units by “cutting” the communications links to the rear. But with edge computing, “serious computing power sits right behind the node (a connection point in a communications network),” Buettner said.

With the processing power sitting with the forward unit, it would reduce the need to move large amounts of the data to the next level of command toward the rear to be processed. This computational power could even allow the forward unit to continue operating when and if the long-haul links are cut by adversaries.

In a potential real-world example, Buettner described a U.S. Marine Corps unit operating far forward on an island in an area where air combat is occurring. The unit takes casualties in a firefight but is unable to call for a medivac because the enemy is jamming satellite systems. Even if they could contact rear units for a medivac, helicopters might not be able to respond because of enemy fighter aircraft.

The field medic, using 5G enabled augmented reality technology, “might be able to perform surgical tasks that she has never done before to save lives on the battlefield,” Buettner explained. “(U.S. Marine Corps) student officers here at the NPS have explored exactly this concept for a project they titled Enhanced Corpsman to Hospital Optical System.”

At the Sea Land Air Military Research beach lab in Monterey, AT&T and NPS, through a three-year collaborative agreement, will be testing many other applications for 5G technology, including communications among both manned and unmanned sea vessels, autonomous air vehicles (think drones) and underwater robotic vehicles.

Monterey: Naval Postgraduate School launches 5G research with AT&T – Monterey Herald

Elroy Air’s Series A Financing
(Elroy Air 3 Aug 21)

Elroy Air, the Aerospace and Logistics company developing the world’s first end-to-end autonomous vertical take-off and landing (VTOL) aerial cargo systems, has raised a $40MM Series A financing from Marlinspike Capital, Lockheed Martin Ventures, and Prosperity7 Ventures alongside continued backing from existing investors including Catapult Ventures, DiamondStream Partners, Side X Side Management,
accelerate development of the VTOL space and pave the way for other applications. Elroy Air is well positioned to become a market leader. We believe targeting logistics will help their strong team, unique design features, hybrid engine allowing reliability for heavier loads and longer range operations. The company is the first to bring to aerial logistics.

The future impact of the cutting-edge Chaparral vehicle is dramatically expanded express capabilities and service areas for multinational parcel shippers, immediate humanitarian aid and relief in disaster and fire-fighting situations, flexible logistics for the energy and mining industries, and rapid autonomous aerial resupply for US and allied troops in the field.

“This funding propels us into an exciting new stage of our business,” said David Merrill, CEO of Elroy Air. “We’re going to complete the build of full-capability pre-production aircraft, advance our certification programs, secure key supply chain partnerships, and enter into flight-test operations in collaboration with our partners at the Naval Postgraduate School and the US Air Force. It’s going to be an amazing next phase!”

Elroy Air’s financing reflects strong investor enthusiasm for leading technology companies in VTOL aerospace, autonomous systems, logistics, and defense / dual-use technologies. “Rapid logistics has exponentially grown over the last couple of years. We believe that building an autonomous VTOL logistics system that does not require additional infrastructure can play a vital role enabling rapid delivery for commercial, defense and humanitarian logistics” said Kofi Asante, VP of Business Development and Strategy. The commercial courier, express, and parcel market is currently estimated at $450Bn worldwide and is growing year over year. Delivery drones are gaining traction for express short-range parcel logistics, medical logistics, and the defense markets — arenas where autonomous systems and robotics are in increasing demand. Delivery drones deployed today are designed for small payload “last-mile” deliveries of a single parcel at a time, whilst Elroy Air’s bet is on the larger market opportunity for heavier-payload “middle-mile” logistics (e.g. warehouse to warehouse).

“Elroy Air is a perfect example of the type of high-growth company that we invest in,” said Neil Keegan, CEO/CIO of Marlinspike Capital. “My partners and I all served in the US Military, and we founded Marlinspike to bring our collective experiences to bear on investments that are beneficial to the defense of our country. We invest in the most promising dual-use technology companies, and the Elroy Air team is leading the field with its unique technology and its opportunity to revolutionize both the commercial and defense logistics markets. Their early traction with Agility Prime (USAF) and the Navy (NPS) are highlights “tip of the spear” disruptive solutions. We know firsthand how valuable Chaparral will be deployed with our US Forces. We see an incredible growth trajectory ahead and are thrilled to be teamed with Dave, Clint, and the rest of the outstanding Elroy Air team.”

“Logistics and delivery services market is huge, and it will continue to grow with the continuing growth of e-commerce.” said Aysar Tayeb, Executive Managing Director of Prosperity7 Ventures. “With their strong team, unique design features, hybrid engine allowing reliability for heavier loads and longer distances, Elroy Air is well positioned to become a market leader. We believe targeting logistics will help accelerate development of the VTOL space and pave the way for other applications.”
“Lockheed Martin is committed to identifying and investing in leading edge technologies that will contribute to the national security solutions of the future,” said Chris Moran, executive director and general manager of Lockheed Martin Ventures. “Unmanned aerial systems and VTOL aircraft are key emerging technologies in this effort, and we are excited to partner with Elroy Air to accelerate their innovative approach to automating aerial logistics.”

Elroy Air is currently integrating its next, full-capability pre-production Chaparral aircraft with its team validating subsystems and software and a composites partner building airframes. The company plans to complete the build of the next system by the end of the year and begin flight validation with US Air Force (Agility Prime) and Navy (NPS) partners in 2022.

Elroy Air’s Series A Financing, Elroy Air Raises $40MM Series A… | by Elroy Air | Medium

FACULTY:

Fixing Fraud at For-Profit Colleges
(TheRegReview 30 Oct 21) … Taylor Ross, Katherine Rohde and Caitlin Kim

Scholars advocate enhancing regulations to decrease fraudulent practices used by for-profit schools.

Just last month, the Federal Trade Commission (FTC) put 70 for-profit colleges and universities on notice for potentially deceptive conduct in the higher education marketplace. In issuing a Notice of Penalty Offenses, the FTC clarified its intention to revive its dormant Penalty Offense Authority, under which for-profit schools could be punished for deceptive practices, such as fraudulent advertisements about student success.

The fact that a school received the FTC’s notice does not indicate wrongdoing. The agency’s announcement does, however, signal a renewed interest in regulating the behavior of for-profit schools.

In 1998, Congress updated the Higher Education Act (HEA) to contain the 90/10 rule, which mandates that proprietary institutions derive at least 10 percent of their annual revenue from sources other than the government. The rule acts as a proxy for measuring educational quality by ensuring that for-profit schools offer an education supported by at least some of students’ own money. President Barack Obama championed strict enforcement of the 90/10 rule.

President Obama furthered his enforcement efforts by adding the Gainful Employment (GE) rule to the HEA in 2014, requiring for-profit schools to prove that the majority of their students were eligible for employment following graduation. In 2016, he also reintroduced the Borrower Defense to Repayment (BDR) rule, which made students whose schools had misled them eligible for the partial or full discharge of their federal student loan debt.

The Trump administration repealed the GE rule and suspended BDR regulations. Now, however, for-profit institutions anticipate the reinstatement of Obama-era policies. Higher education experts recognize many ways in which the Biden administration can best intervene to hold for-profit schools accountable. Some experts suggest that state governments should intervene as regulatory actors. Others call for harsher, federal-level interventions.

In this week’s Saturday Seminar, scholars consider an array of solutions for better regulating the behavior of for-profit institutions of higher education.

In a working paper published by Brown University’s Annenberg Institute, Stephanie Riegg Cellini of the George Washington Institute of Public Policy argues that for-profit institutions capture a substantial portion of federal student-aid subsidies while leaving the vast majority of borrowers worse off than graduates from schools in other sectors. One solution, Cellini suggests, is for policymakers to increase accountability measures to protect borrowers and taxpayers from harmful practices in the for-profit sector. She also recommends that borrowers switch to better-performing institutions in the face of such practices as a means of holding low-performing institutions accountable.
In an article for The Century Foundation, Robert Shireman argues that federal regulation of for-profit colleges occurs in a cycle. Federal funds create financial incentives that lead to underperformance and questionable practices by for-profit colleges, which prompt federal regulation. But once the regulations work, Congress relaxes them and again allows for repeat offenses. Shireman recommends several policies to break this cycle, including requiring accreditation, banning federal aid to programs that create huge debt burdens, and improving information provided to consumers.

Policymakers should increase oversight of for-profit college advertising, argue Stephanie Riegg Cellini of The George Washington University and Latika Hartmann of the Naval Postgraduate School. In a report for the Brookings Institution, Cellini and Hartmann assess the advertising expenditures of all degree-granting institutions from 2001 to 2017. They report that although for-profit colleges serve just 6 percent of students, they account for over 40 percent of all college advertising dollars. Moreover, for-profit colleges spend four times as much on advertising per student as nonprofits. Cellini and Hartmann call for increased mandatory disclosures on college advertising, recruitment, and marketing expenditures. They also propose stronger enforcement of laws prohibiting misrepresentation.

In an article in the UC Irvine Law Review, Matthew A. Bruckner of Howard University School of Law argues that the higher education “regulatory triad”—composed of the U.S. Department of Education accrediting agencies, and states—is failing to protect student loan borrowers from predatory institutions. Bruckner focuses on states, contending that they are “best positioned” to protect students from fraudulent practices. Because federal policy can change drastically between administrations, Bruckner proposes that states should implement their own gainful employment rules. In addition, Bruckner suggests that states should comprehensively evaluate colleges for adequate material and human resources before authorizing their operation. By taking additional regulatory measures, Bruckner argues that states can become “stewards of higher educational quality.”

Private student loan borrowers, particularly those attending for-profit schools, face a severe lack of consumer protections, argues Prentiss Cox of the University of Minnesota Law School, Judith Fox of Notre Dame Law School, and Stacey Tutt of UC Irvine School of Law. In an article published in the UC Irvine Law Review, Cox, Fox, and Tutt propose state-level policies modeled after existing federal frameworks to bolster consumer protections. First, they suggest that states use the FTC’s “Holder Rule” as a template for enacting the model Private Student Borrower Protection Act, which would require private loan contracts to ensure the kinds of protection afforded to federal student loan borrowers. Second, they urge states to enact the model Private Student Loan Mediation Act, which would create “mandatory mediation programs” based on successful state-level mortgage programs implemented during the 2008 financial crisis.

In a policy brief for The Center for American Progress, research assistant Melissa Alayna Navarro explains how the Accrediting Commission of Career Schools and Colleges (ACCSC) failed to revoke the accreditation of a fraudulent organization operating for-profit colleges for over a decade. Navarro explains that the ACCSC had numerous opportunities to revoke accreditation but did not, instead allowing for-profit colleges to accept over $1.8 billion dollars from the federal government and put students in harmful situations. Navarro demands an investigation of the ACCSC and advocates that the U.S. Department of Education should increase its oversight over for-profit colleges.

Fixing Fraud at For-Profit Colleges | The Regulatory Review (theregreviiew.org)

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DARPA SubT Challenge
(Iinside Unmanned Systems I Nov 21) … Dawn M.K. Zoldi

As the final event of the Defense Advanced Research Projects Agency (DARPA) Subterranean (SubT) Challenge concluded on Sept. 24, team CERBERUS (Collaborative walking & flying RoBots for autonomous ExploRation in Underground Settings) stood victorious over seven other global systems competitors, taking home $2 mil- lion in prize money. More importantly, DARPA now
stands better equipped to assist warfighters and first responders in safely exploring dangerous, dark or deep underground environments.

Caves, mines, tunnels, sewer systems and the urban underground are notoriously dangerous. Operators in these uncharted territories often encounter random forks in the road, deep inclines, smoke-filled corridors, uneven terrain (mud, rubble or rocks), water, airborne particulates and other unexpected obstacles. The SubT Challenge sought to revolutionize how defenders function in this hazardous and high-risk underground domain, particularly in time-sensitive scenarios.

Tim Chung, Ph.D., program manager of DARPA’s Tactical Technology Office (TTO), led the project. Chung has an extensive background in robotics as a former assistant professor at the Naval Postgraduate School, director of the Advanced Robotic Systems Engineering Laboratory (ARSENAL) and prior deputy director of the Secretary of the Navy initiative for the Consortium for Robotics and Unmanned Systems Education and Research (CRUSER). The SubT Challenge, Chung said, was looking for robots that are “the best all-around triathletes,” able to operate in tunnels, urban underground and caves. “In the future, we can imagine reducing risk to the rescuers in those environments if robots could provide timely and critical information.” Not surprisingly, the SubT Challenge scenarios involved urgent (T-minus “minutes”) search and locate missions.

The three-year SubT effort focused on robotic AIML (Artificial Intelligence Markup Language) applications in dynamic underground scenarios, with an emphasis on providing actionable situational awareness. The robots continuously proved their mettle in roles ranging from low-level control—such as how to get over a rock—to more advanced tasks such as shifting into a scout or comms relay mission, to multi-teammate coordination and optimization.

THE COMPETITION

Prior to this culminating event, 14 teams deployed their autonomous robots, in person, virtually or in a combination of those formats, to map, navigate and search underground spaces. The teams participated in three underground Circuit Competitions: “Tunnel,” “Urban” and “Cave.” A Virtual Competition worked hand-in-hand with the live Systems Competitions, providing teams worldwide access to a synthetic environment to prove their autonomy software.

DARPA transformed a coal mine and an unfinished nuclear power plant into robot test sites. Teams earned points by correctly identifying artifacts placed within those environments. They completed four total runs—two 60-minute runs on each of two courses of varying difficulty—and earned points by correctly identifying 20 artifacts within a 5 meter accuracy. The final score was a total of each team’s best mark from each of the courses. These scores determined eligibility for the final Grand Challenge.

For the final event, held Sept. 21-24 at Kentucky’s Louisville Mega Cavern, DARPA wiped the scoreboard clean; teams started fresh. The live-action course involved a working commercial limestone mine and all three domains.

The Systems Competition was fierce. CERBERUS, the $2 million winner, drew its conceptual inspiration from its namesake mythological three-headed dog protector of the underworld. “From a robotics standpoint, we are inspired from the potential of combining two very different modalities of location, namely walking and flying, while simultaneously addressing in a unified manner the perception and navigation challenges.” according to the DARPA website. The second-place team, CSIRO Data61, received $1 million and the third-place team, MARBLE, $500,000.

DAPRA provided separate prize money to the virtual winners. Hilario Tome, Spain-based and self-funded team Dynamo, took home the $750,000 first-place prize. CTU-CRAS-NORLAB nabbed second place for $500,000 and Coordinated Robotics came in third for $250,000. DARPA funded these latter two teams in the Systems Competition, but they were self-funded for the virtual portion.

For Chung, these challenges were worth every penny spent because they validated the reliability and resilience robots bring to the cross-domain fight. “Reliability means the equipment will do what it is expected to do in the face of what we actually expected. Resilience means that it will do what we hoped it would do in the face of the unexpected. SubT showed us how we can better accomplish both of these things through AIML and human-machine teaming.”
DARPA remains eager to engage with anyone who can bring novel concepts, innovative approaches, and breakthrough technologies and capabilities in support of national security. To learn more about how to engage with DARPA visit: https://www.darpa.mil/work-with-us/opportunities.

DARPA SubT Challenge - Inside Unmanned Systems

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ALUMNI:
Jacqueline Maguire Named Special Agent in Charge of FBI’s Philadelphia Field Office
(Tickle The Wire 26 Oct 21) … Steve Neavling

Jacqueline Maguire has been named special agent in charge of the FBI’s Philadelphia Field Office. Before the appointment, Maguire was serving as special agent in charge of the Criminal Division of the New York Field Office.

Maguire joined the FBI as a special agent in 2000 and was assigned to the New York Field Office as a member of the Joint Terrorism Task Force. A year later, Maguire was the lead agent investigating the five people who hijacked American Airlines Flight 77, which crashed into the Pentagon.

In 2006, Maguire began working at the Counterterrorism Division at FBI headquarters, serving as the supervisory special agent and then unit chief. In 2011, Maguire moved to the Washington Field Office, serving as a supervisory special agent. Then in 2014, she became special assistant to the executive assistant director of the Human Resources Branch at FBI headquarters.

In 2016, Maguire she began serving as assistant special agent in charge of the Birmingham Field Office in Alabama, overseeing criminal and administrative issues. A year later, she was promoted to section chief in the Office of Public Affairs in 2017. In 2019, she was promoted to deputy assistant director of the office.

Maguire was twice awarded for service, receiving the Attorney General’s “Award for Excellence in Furthering the Interests of U.S. National Security” in 2006 and the Attorney General’s “Award for Distinguished Service” in 2009.

Before coming to the FBI, Maguire worked at the Office of the Medical Examiner in Suffolk County, NY.

Maguire attended Villanova University, where she earned a bachelor’s degree in comprehensive science. At Long Island University, she earned a master’s degree in criminal justice. And at the Naval Postgraduate School, she earned a master’s degree in homeland defense and security.

Tickle The Wire » Jacqueline Maguire Named Special Agent in Charge of FBI’s Philadelphia Field Office

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Wilson Perumal & Company Promotes Ernie Spence to Principal
(PRNewswire 28 Oct 21)

Wilson Perumal & Company, Inc. (WP&C), a premier strategy and operations consultancy, is pleased to announce the promotion of Ernie Spence to Principal. In his new role, Spence will oversee multiple project teams solving critical issues for C-level clients, and serve as a member of the firm’s leadership team.

"Ernie is a tremendous asset," said Andrei Perumal, co-founder and managing partner of WP&C. "He is a great talent and has a huge bandwidth. In the Principal role, Ernie will be able to have even greater impact, across a greater number of clients, and a larger role in team and firm development."

Spence has a proven track record of helping companies, private equity firms, and government organizations develop and implement practical solutions to pressing operational and strategic challenges.

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In his five years at WP&C, he has consistently led successful projects across a variety of industries, leveraging his deep experience in organizational transformation, leadership development, business strategy, workforce management, and human performance.

A trusted advisor to senior executives and a TEDx speaker, Spence co-designed WP&C’s proprietary Leadership Development Program, Supervisor Behavior Model, and Human Capital Strategy framework. He recently led the organizational transformation of a US military organization that reduced operating costs by over $85 million, and led a private equity due diligence team in the successful acquisition and growth strategy development of a $100 million fabricator.

"I am grateful for the many opportunities I have to serve our clients," said Spence. "It is truly a privilege to lead our incredibly talented consultants."

Spence previously served as Vice President of Operations for Synnexus. Earlier, as a fighter pilot and test pilot in the US Navy, Spence commanded and turned around multiple F/A-18 squadrons, including the largest in the Navy, for which he reduced operations and maintenance costs by 36% in one year. He earned an MS Aeronautical Engineering from the Naval Postgraduate School/U.S. Naval Test Pilot School and an MS National Resource Strategy from the National Defense University, Eisenhower School.

**Wilson Perumal & Company Promotes Ernie Spence to Principal | News | wfmz.com**

**USS Alaska (SSBN 732) Gold Crew Changes Command**

(DVIDS 29 Oct 21) … U.S. Navy Lt. Stuart Phillips

The Gold crew of the Ohio-class ballistic-missile submarine USS Alaska (SSBN 732) held a change of command onboard Naval Submarine Base Kings Bay, Georgia, Oct. 29.

Cmdr. Justin Hardy relieved Cmdr. Adam Thomas as the Gold crew’s commanding officer in a ceremony held at the base chapel.

Retired Capt. Mark Davis was the guest speaker at the change of command.

“Adam, you’ve had an exceptional command tour, and I know your Dad, John, and your Stepmom, Carol, are bursting with pride today,” said Davis. “I take great pleasure in seeing your accomplishments, and I know that you will continue to serve our great submarine force. You earned your seat at the head of the table and you served with distinction.”

Thomas, a native of Ann Arbor, Michigan, graduated with honors from the University of Michigan in 2002 with a degree in nuclear engineering. He later earned a master’s degree in operations research with honors from the Naval Postgraduate School.

“Admiral Richard, the combatant commander for U.S. Strategic Command who directs all of our nuclear forces, frequently talks about the 150,000 Sailors, Airmen, Soldiers, Marines, and civil servants who comprise our nuclear deterrent and execute the most important mission in the department of defense,” said Thomas. “We, as USS Alaska – because there are about 150 of us – make up 1/1000th of that force. I’d like to think that over the past 2.5 years, we performed way more than 1/1000th of the mission.”

Thomas praised his crew for their performance under his command.

“We, as professional war fighters, operate the most powerful warship ever created in order to execute the most important mission in the department of defense. If nothing else, I hope everyone who’s served with me remembers that for the rest of your life, and looks back on it proudly. With the help of our families and friends sitting over here, what really makes us the most powerful warship ever created is the Sailors sitting over there. They’re the ones who take a simple idea – get the submarine underway, stay underway and undetected – and use their skills and knowledge to turn that idea into a reality. And we do that every day, and Alaska will keep winning without me here.”

Under his command, Alaska executed the Department of Defense’s number one mission of nuclear deterrence, completing three strategic deterrent patrols. During this time, Alaska also conducted the first overseas crew exchange in Faslane, Scotland since the Cold War, and also executed operations in the
Mediterranean with a highly visible port visit to Gibraltar. Additionally, Alaska was awarded the Squadron Twenty Battle Efficiency Award and the U.S. Strategic Command Omaha Trophy in 2019. Alaska also earned Retention Excellence Awards for developing and retaining Sailors while Thomas was in command.

The incoming commanding officer, Hardy, takes command after serving as the Director of Nuclear Power School where he oversaw a staff of 200 and the training of 3,000 future nuclear officers and enlisted Sailors annually.

Hardy directed his closing remarks to the family members of his new crew.

“The world is more dangerous today than it has ever been in my lifetime and your loved ones have been placed in a position to assure peace is maintained. I will do my part to make sure they are ready for whatever challenges are placed in our way. However, we cannot be successful without your continued support and sacrifices. Thank you for all that you have done and will continue to do in support your Sailor.”

During the ceremony, Thomas was awarded the Legion of Merit for his performance as commanding officer.

Alaska is the fourth U.S. Navy ship to bear the name of the state.

DVIDS - News - USS Alaska (SSBN 732) Gold Crew Changes Command (dvidshub.net)