



DOMNATE LITTORALS NAVAL SURFACE WARFARE CENTER PANAMA CITY DIVISION



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The Coastal Compass is published bimonthly by the Naval Surface Warfare Center Panama City Division (NSWC PCD) and is an authorized medium for news of general interest about employees of NSWC PCD and their work.

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- Front Cover: Jeffrey Koe, Naval Surface Warfare Center Port Hueneme Division technical director, takes a flight on Naval Surface Warfare Center Panama City Division's Landing Craft Air Cushion (LCAC) vehicle, May 2. NSWC PCD's Expeditionary Warfare and Littoral Operations hosted this part of his tour. (U.S. Navy photo by Ronnie Newsome)
- Back Cover: Skip Whitmore, NSWC PCD Air Cushion Vehicle Technical Services Branch In-Service Engineering Agent crew/Landing Craft Air Cushion (LCAC) Operations lead, watches Jeffrey Koe, NSWC Port Hueneme Division technical director, during Koe's LCAC familiarization flight, May 2. This one-week, technical director rotation helped Koe better understand how NSWC PCD supports the warfighter. (U.S. Navy photo by Ronnie Newsome)

VIEW EROM THE BRIDGE



Dr. Peter Adair, SES Technical Director

Team PCD,

As we continue to unpack our strategic plan throughout each *Coastal Compass* publication in 2024, this edition focuses on our next priority/category: Technical Excellence.

In the early 1940s, our origins began with mine countermeasures research conducted during World War II. Today, Naval Surface Warfare Center Panama City Division is one of the major research, development, test and evaluation (RDT&E) laboratories in the U.S. Navy and boasts a wide base of expertise in engineering and scientific disciplines. Though our name has changed over the years, we remain rooted in the technical excellence we started almost 80 years ago.

As a Naval Sea Systems Command Warfare Center, we exist to solve complex problems and help the Navy determine and develop the relevant capabilities it needs.

Our strategic priority of technical excellence reinforces our posture to conduct operational missions within the entire littoral (coastal) battlespace. Fundamental to our strategic plan, we are positioned to deliver technically superior solutions across the entire littoral warfighting domain, from seabed to space. Our organization understands relevant operational missions and how they help shape the future of warfighting in the littorals. Our in-house technical leadership and expertise, along with our strategic partnerships, provide warfighter solutions balanced across risk, time, cost, and performance.

ISSUE

To demonstrate technical excellence, we must:

- Continue to provide consistent, on-time delivery of quality products and services to the fleet to ensure their ability to successfully execute their mission and remain safe.
- Assert credible technical leadership throughout the Department of the Navy. NSWC PCD is one of the Navy's premier RDT&E laboratories. We play an important, value-added role to ensure safe, affordable and effective products are delivered to the fleet. As technical experts, the Navy depends on us to provide ground-truth and develop innovative, technical solutions to meet the needs of our nation's warfighters.
- Leverage cutting edge tools and technologies to increase efficiency and effectiveness. As a command, we anticipate the future needs and drive the future Naval capabilities within the littoral battlespace. We are the organization the fleet trusts because of our innovative and rapid solution capabilities to solve their needs, both current and future. In order to provide tomorrow's warfighter with an overwhelming advantage, one must understand the environment, be able to predict future enemy threats, and develop integrated technical solutions to dominate and deter adversaries. Through our partnerships with fleet users, allies, and strategic partners, we leverage collaboration and tools to deliver capabilities into the hands of our warfighters in the most efficient way.

In closing, each of you provide a vital role in ensuring technical excellence at NSWC PCD, no matter the role you serve in at the command. I want to thank you for what you do each day in support of the warfighter, the Navy, and the nation.

> Dr. Peter Adair, SES NSWC PCD Technical Director

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CIVILIAN LENGTH OF SERVICE

MAY/JUNE 2024

Name	Years	Name	Years	Name	Years
Vicki Sasser	40	Nina Davis	15	Timothy Backus	5
Michael Hodges	35	Matthew Edminster	15	Darrell Bainter	5
Zena Le	35	Mary Kathryn Handal	15	Kaisey Balsters	5
Michael Shepherd	35	Stephen Hoyer	15	Drew Becza	5
Jo Wilbur	35	Jean-Francois Kamath	15	Justin Bibler	5
Harry Evans, li	25	Jonathan Kowalczik	15	Jonathan Chapman	5
Jennifer Jomalon	25	David Mercer	15	Heather Deich	5
Daniel Kucik	25	Timothy Nehring, Sr	15	Jamie Frederick	5
Russell Shepherd	25	Oscar Pineda	15	Brunti Givens	5
Tommy Bushman	20	Joshua Slaughter	15	Jonathan Grievson	5
Karen McGough	20	Christopher Sutton	15	Isaac Guettler	5
Stephen Peffers	20	Adam Vickers	15	Lauren Howell	5
Evan Applegate	15	Wayne Vickers	15	Catherine O'Rourke	5
Kevin Barron	15	Peter Walker	15	Judith Parker	5
Jason Bennett	15	Kenyatta Bennett	10	Raymond Serna	5
Anthony Bleichner	15	Damion Dunlap	10	Scott Sones	5
Richard Bodine	15	Joseph Rienzo	10	Phillip Sowders	5
John Carlin	15	Kurobuboka Tamunoitekena	10		

NSWC PCD DAWIA

Defense Acquisition Workforce Improvement Act

Congratulations to our employees for completing their DAWIA requirements this period!

Blake Draut Joseph Earnest Kyle Greer Joseph Hardin Emily Holtum Nicholas Sarica

ABOARD!

Allen Freeman - 00 Justin Naud - 0121 Gina Stiglbauer - 0122 Timothy George - 022 Michael Frink - 1073 William Goode - 1042 SGT Traci Sarpong - 1044 Jose Costas Calderin - A32 Matthew Eggimann - A14 Annika Emery - A42 Thomas Fulton - A33 James Glass - A23 ET1 Dominick Hughes - A32 Bryce Rauch - A25 Jeffrey Carter - E41 Joshua Duncan - E26 Benjamin Ebel - E24 Meredith Matthews - E42 Jeremy Merry - E53 Mayte Castro-Cabrera - S12 Nathan Marshall - S11 Zachary Senecal - S14 Tammy Stundon - S12

AWARDS

WINNERS

CAREERS and disABLED Employee of the Year - Kristin Shaw

UPCOMING

10 July	International Test and Evaluation Association Professional Awards
9 August	Black Engineer of the Year Awards (BEYA) Professional and Academia Awards
30 August	American Society of Mechanical Engineers
	Freeman Scholar Award
17 September	BEYA Science Spectrum Trailblazer
	BEYA Modern Day Technology Leaders

DIVISION SPOTLIGHT



Jason Ten Broeck

A Department Mine Warfare and Unmanned Operations

Code A40 Analysis, Tactics, and Simulation Division

Code A44 Modeling and Simulation Branch

What is your position title and how long have you worked at NSWC PCD?

I'm the Lab Manager for the Computational Analysis Facilities (CAF) Research, Development, Test, and Evaluation (RDT&E) labs and have worked at NSWC PCD since August of 2009.

Why did you decide to work at NSWC PCD?

I started as a cooperative education student [students who alternate between academic semesters and semesters spent working paid, full-time positions in their industry] while attending school at Gulf Coast State College in Panama City.

What are you responsible for in your role? How do you contribute to support NAVSEA, fleet and warfighter?

In my role, I oversee the operations of the impact level (IL) 4 to IL6 Mine Warfare and Unmanned Operations (Code A40) CAF RDT&E labs. My primary responsibility involves managing a dynamic, innovative, and secure environment that facilitates Software Development, Software Support Activity, and In-Service Engineering Agent support for Program Executive Office Unmanned and Small Combatants - Mine Warfare Program Office (PMS 495) projects.

Our lab not only supports these specific projects, but also extends to other programs within NSWC PCD's technical department areas leveraging our lab's unique hosting capabilities to bolster Naval Sea Systems Command's mission, as well as the broader fleet and warfighter support efforts.

What does your branch do?

Code A44 is NSWC PCD's Modeling and Simulation Branch, however the CAF lab supports the entirety of the Analysis, Tactics, and Simulation Division's (A40) Mine Warfare and Unmanned Operations mission.

What does your division do to support NSWC PCD and the Navy?

A40 provides warfare analysis expertise that can be executed through various methods, including modeling and simulation tools that are also developed within the division. My division also provides tactics support to multiple programs across the command, as well as does software development for several fleet-deployed tool. My work touches all areas, since I lead the lab that enables all these groups to do their part.

NSWCS PCD AND PHD USE TECHNICAL DIRECTOR ROTATION TO BUILD A LEARNING ORGANIZATION

By Jeremy Roman, NSWC PCD Public Affairs

PANAMA CITY, Fla. – The Naval Sea Systems Command (NAVSEA) continued its pursuit to construct a world-class team built on exceptional technical proficiency and leadership competence during a recent NAVSEA Warfare Centers' Technical Director (TD) swap, last month.

Separated by more than 2,250 miles, Naval Surface Warfare Centers (NSWC) Technical Directors Dr. Peter Adair, SES, NSWC Panama City Division (PCD), and Jeffrey Koe, SES, NSWC Port Hueneme Division (PHD), switched their respective locations to gain specific, valuable insight into the One Team NAVSEA enterprise.

"I have a great relationship with Dr. Adair, and already have a connection to [NSWC] PCD with my work in the former Littoral Strike and Warfare Department at my command, specific to LCS mission packages. To see some of PCD's work done in person was an opportunity I didn't want to miss," said Koe. "It's always beneficial to see how another warfare center operates, in terms of their technical work and business operations, as well as their overall culture...and there are always ideas and best practices that can be brought

make them even better." During their respective one-week

back to our own home divisions to



(left of center) Koe prepares for his flight on Naval Surface Warfare Center Panama City Division's Landing Craft Air Cushion alongside NSWC PCD Expeditionary Systems Division personnel. This division provides vital expeditionary warfare and test & evaluation capabilities to enable maritime mining, amphibious assault, seabasing, command & control, communications, and power projection. (U.S. Navy photo by Ronnie Newsome)

rotations, the TDs received mission briefs and hands-on tours of various capabilities that support the warfighter. What Adair appreciated most was NSWC PHD's engagement and real-time support of the fleet.

"I saw great collaboration with other warfare centers to ensure that ships in the 5th fleet's area of responsibility were going to be made operationally ready as quickly as possible, due to ship casualties," said Adair. "As always, it boiled down to the people that I saw in action. They were highly competent and had a great passion for helping the warfighter."

Koe said NSWC PCD's personnel and the scope of their work left a lasting impression on him.

"Despite the fact that we mostly work in very different areas of fleet support, we are all One Team and committed to delivering



(right) Dan Kucik, NSWC PCD Unmanned Systems distinguished engineer, provides Koe with an overview of this Navy lab's more than 60-year history in developing and fielding unmanned systems at NSWC PCD's Littoral Warfare Research Complex, April 30. (U.S. Navy photo by Eddie Green)

solutions and capabilities to the warfighter across the board...and everyone had that mindset of providing support to the Navy and the warfighter," said Koe. "I was impressed with the amount of research and development taking place at PCD, and how that is such a strong component of the command's culture. I'm sure being able to design, experiment with and produce new technologies contributes to workforce retention."

Although this particular NAVSEA Warfare Center TD rotation satisfies part



(left) Gene Scampone, NSWC Port Hueneme Division's (NSWC PHD) Mission Package Support Facility (MPSF) manager, takes Dr. Peter Adair, NSWC Panama City Division technical director, on an MPSF tour also accompanied by Susan Vargas, NSWC PHD deputy chief of staff, and Andrew Payor, MPSF sustainment principal assistant program manager, April 30. The MPSF provides assembly and sustainment to littoral combat ship mission packages. (U.S. Navy photo by Dana Rene White)

of their performance objectives requirement once a year, there are rotational opportunities within the enterprise for the NAVSEA workforce. Both technical directors are advocates of opportunities like this. "I wish everyone within the warfare centers could do wish I had the opportunity to do earlier in my career," said Koe. "It's good to get a different perspective and see how other organizations work, but what is really important are the relationships we are building."

See technical director rotation, page 8



(left) NSWC Panama City Division Technical Director (TD) Dr. Peter Adair speaks with (right) Capt. Tony Holmes, NSWC Port Hueneme Division (NSWC PHD) commanding officer, and other members of NSWC PHD's executive leadership team during departmental briefs, April 29. Adair and NSWC PHD TD Jeff Koe swapped positions April 29 - May 2. (U.S. Navy photo by Eric Parsons)

a swap of some kind. It adds a different perspective to the work that we are doing, as well as identifying best practices and opportunities for future collaboration," said Adair. "We all tend to operate in our stove pipes, even within our own commands. I think that it's critically important to take a moment and look around at different ways to accomplish the mission, as well as generating novel ideas to spur innovation by taking good ideas from multiple sources outside of our silos."

"I had a great time and learned a lot! I think nothing but good can come out of these rotations. They are something I

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Capt. David Back, Naval Surface Warfare Center Panama City Division commanding officer, and members of his leadership team welcome Jeffrey Koe, Naval Surface Warfare Center Port Hueneme Division technical director, for his technical director swap, April 29. This one-week rotation helped Koe better understand how NSWC PCD supports the warfighter. (U.S. Navy photo by Eddie Green)



Dr. Peter Adair (center left), technical director of NSWC Panama City Division, poses for a group photo with NSWC Port Hueneme Division (PHD) Commanding Officer Capt. Tony Holmes (center) and other command and department leaders prior to a briefing May 2 in Building 445. It was Adair's last day of his swap with NSWC PHD Technical Director Jeff Koe, who spent the week in Panama City. (U.S. Navy photo by Dana Rene White/Released)



SPOTLIGHT : NSWC PCD ASIAN AMERICAN/PACIFIC ISLANDER



Dr. Raymond (Ray) Lim holds the position of physical acoustics senior scientist at NSWC Panama City Division (PCD) and has become a symbol of excellence within the mine countermeasures (MCM) field during his 36year career.

He leads and works on projects that utilize acoustic technologies to detect and classify mines and unexploded ordnance. He has won five Coastal System Station (currently NSWC PCD) Independent Research Best Paper Awards, received the command's Superior Achievement in Science and Technology Annual Award and is a fellow of the Acoustical Society of America. His success should come as no surprise.

Lim's academic pursuits began in Houston, Texas, where he earned his Bachelor of Arts (cum laude) in Chemistry and Chemical Physics from Rice University. He

then proceeded to Cambridge, Massachusetts, where he earned his Ph.D. in Physical Chemistry from the Massachusetts Institute of Technology. After completing a postdoctoral appointment at Florida State University in Tallahassee, he joined the NSWC PCD research department in 1988.

"In this capacity, I have formulated models furthering our understanding of buried target acoustics that contribute to the development of sonar systems capable of detecting and classifying these targets for the Navy's MCM mission," said Lim. "Many of the fundamental insights gained have also been published in the open literature and these further the reputation of our lab, which helps to attract future researchers that will continue the work needed to maintain the Navy's technological lead in critical mission areas. More recently, I have worked with NAVSEA mining programs to develop and improve algorithms to passively localize and track ocean vessels."

Lim credits his upbringing for many of his achievements. His parents emigrated from China to Houston in the 1950's, where they opened and ran a small grocery store until they retired.

"While working [then] was quite different from what I do now, the level of dedication needed to make that business a success meant 12+ hour workdays [and no holidays off] to maintain the trust of the neighborhood we served. While that work ethic...engrained in me helped me to rise to a senior position, as well as develop a lasting technical reputation, [excellence at this level] would have been difficult to maintain if the work I do didn't challenge me constantly," said Lim. "I feel the best thing one can do to ensure job success is to choose a career path one finds interesting and challenging and make sure this requirement can be met when accepting a job. Though compromises are inevitable, PCD has mostly met this requirement for me since I came on board."

This Navy Lab has provided Lim with the perfect arena to thrive.

"I like that NSWC PCD is right on the beautiful beaches of the Gulf Coast. The work is challenging, but at the end of the day, it's easy to unwind with friends fishing off the jetties at St Andrews State Park, while watching the sun set," said Lim.



Send comments to NSWC PCD Command Historian Shauna Lave-vonKnoblauch at shauna.r.love-vonknoblauch.civ@us.navy.mil

Technical Excellence

Naval Surface Warfare Center Panama City Division1 (NSWC PCD) has achieved some major accomplishments over the course of its rich history. The scope of technical rigor is indicative of the technical breadth and innovative spirit that characterizes the NSWC PCD workforce as demonstrated in the examples below. And looking forward, this Navy Lab is uniquely positioned to continue to meet the research, development, test and evaluation, and in-service support needs associated with Navy systems that operate in the littorals, for the Navy after next.

Capt. J.C. Myers departed the laboratory in July 1957. His four-year tour had been characterized by a number of initiatives focused on firmly establishing the technical credibility of the laboratory in the Navy research and development community. Capt. Myers had been instrumental in building both the facilities and the technical reputation of the laboratory.





The shipbuilding industry throughout the world recognized the importance of scale model testing in determining a ship's performance prior to its construction. In 1958, one of these tanks was installed in the basement of NSWC PCD Headquarters, the Lab's new scientific building at the time. This pool was used to conduct tests in the laboratory rather than in the field to save materials and manpower. The facility provided means for: 1) conducting applied research in connection with hydrodynamics of mine and torpedo countermeasures; 2) appraising proposals for countermeasures equipment and techniques; 3) validating the feasibility study of countermeasures systems; 4) conducting studies in the experimental development phase; and 5) investigating deficiencies found during the prototype technical evaluation phase,

In the early 60s, the Navy embarked upon an aggressive Manin-the-Sea program. Between 1964 and 1969 the Navy conducted three separate projects (SEALAB I, II, and III) aimed at demonstrating that man could live and work undersea at extreme depths for extended periods of time.







In 1957, the Laboratory accepted the Navy's only two offshore platforms, Stages I and II, designed as research and testing facilities for the Laboratory's scientific program. These platforms, equipped with air conditioning systems, heating systems, laundry facilities, firefighting equipment, and helicopter landing decks, stood forty feet above mean water level and were designed to withstand winds of 125 miles per hour. These two offshore stages remained prominent structures in the Gulf of Mexico for the next 25 years.

NSWC PCD COMPTROLLER LEADS DESIGN INNOVATIVE PROGRAM TO ENHANCE BUSINESS EXCELLENCE

Commentary by NSWC PCD Comptroller Department

In 2023, branch leads from Naval Surface Warfare Center Panama City Division's (NSWC PCD) Comptroller Department designed and developed a dynamic program to strengthen business proficiency across the organization.

The Comptroller Cross Training Rotational Program was strategically designed to meet the needs of command employees who desired to grow their impact through increased understanding of the financial management experience.

The rotation program is open to all employees NSWC PCDwide and offers three types of rotations: Comptroller (Code 01) Internal, Code 01 External, and Command External Rotations. Participants can interact with the various subject matter experts while learning about their respective roles, responsibilities, and the work that they perform in support of the fleet and warfighter. The program also offers a robust experience to expand the employee's knowledge across various comptroller areas including accounting, budget, financial improvement and audit readiness, employee services and support staff, as well as within various areas of NSWC PCD and Naval Sea Systems Command (NAVSEA)/NSWC headquarters.

The origins for this program unknowingly began at the NSWC PCD Comptroller's fiscal year 2022 end-of-year one-on-one meetings with comptroller employees. During these meetings, a recurring theme was the request for additional training opportunities. In response, the comptroller leads decided to develop and deliver a solution to provide additional training through

Pictured left to right: Cory Bruckschen, Jennifer Stallard, Samantha Snellen, Kate Pennington and Jeremy vonKnoblauch. Not pictured: Adrione Canada and Alyssa Luster. (US Navy photo by Ronnie Newsome)

rotational opportunities both inside and outside of the comptroller department. We felt team leads should build the program because they were the closest to the nonsupervisory employees and better positioned to identify more direct training needs.

The concept behind the framework of rotation program is loosely based on the DoN's successful Financial Management Career Program (FMCP), wherein DoN FMCP employees rotate through different areas both internal and external of their command to gain a wide breadth of financial management experience. Unfortunately, the FMCP program is only available to recent college graduates, whereas the NSWC PCD rotation program provides a similar experience and is available to any DoN employee internal or external to the comptroller department.

Another aspect of this program is its versatility and accessibility. It's adaptable to individual trainee and trainer availabilities, it offers virtual and in-person over-theshoulder options, and offers flexible time lengths. The leads have also created a SharePoint website and digital form that allows for a userfriendly application process that routes the request to the supervisor for approval.

The rotational program is a robust, agile, and forward-looking program for internal (comptroller) employees and external (noncomptroller) employees that encompasses opportunities for participants such as:

- * **Broadened Experience:** Participants gain exposure to different aspects of financial management, enhancing their breadth of knowledge and skills.
- Professional Growth: The program provides opportunities for career advancement and personal development.
- * **Networking:** Participants can build professional relationships with colleagues across the organization, fostering collaboration and knowledge sharing.
- * **Skill Enhancement:** Assignments allow individuals to develop new competencies and refine existing ones.
- * Increased Visibility: Exposure to different work environments and challenges increases visibility across the Command and NAVSEA.
- Leadership Development: Participants may take on leadership roles during assignments, contributing to their growth as leaders.

Information about the Comptroller Cross-Training Rotational Program can be found internally within a dedicated SharePoint space, which can be accessed from the NSWC PCD Comptroller SharePoint page. This space was thoughtfully designed to accommodate separate areas for each rotation offered.

Within each distinct area, participants can access detailed information about each rotation, including the specific learning objectives and the processes and procedures they will encounter. Once selected for a rotation, participants spend time with the subject matter experts/trainers, where they receive valuable over-the-shoulder training from experienced professionals. Every rotation requires submission of each of the following: supervisor approval form, rotation request form, completed rotation feedback form, and trainer feedback form.

QUOTES FROM TRAINEES AFTER COMPLETION OF ROTATION:

"...opportunity to work with the personnel in travel, and learn what their day-to-day responsibilities are, what skills are required, and what the overall challenges of the job are [was great]. I really enjoyed being around such a strong collaborative, team/family culture. It's a selfless, honest, and empathetic environment with a strong sense of camaraderie. I also enjoyed witnessing the sense of satisfaction received when directly helping a customer resolve their difficulties."

"Everyone in budget was pleasant to work with. I got along very well with everyone, and they were all very welcoming, patient, and kind. I have no prior knowledge of budget and they were so willing to explain and share their knowledge. Trainers shared so much information through desk guides, notes, printouts, [Funding Allocated Locally Controlled Network] FALCN Tool and explained things to me in a way I could understand."

"I loved working and learning from the trainers. They made sure I understood what they were doing. It was a good overview of some of the things they do each day. Experiencing the PEC and being able to sit in on the meetings was great."

QUOTES FROM TRAINERS AFTER COMPLETION OF ROTATION:

"Trainee displays interest and is a quick learner. She displayed an understanding/retention of the various funds management office concepts and asked some great questions."

"Trainee was extremely engaged during the rotation by asking questions, observing processes, interacting with customers in the office, and looking for new ways to assist Travel in any repetitive tasks."

"Trainee was fully engaged during the rotation by asking questions and observing processes with some minor hands-on training within the [Enterprise Resource System] ERP and FALCN System. Trainee's questions helped us shape the rotation and develop it as we went along to meet her needs."

The Comptroller Department's core vision is to become the most knowledgeable and transformative Comptroller Department of the NAVSEA Warfare Centers. The rotation program is a great example of one of the strategic goals developed within the department to improve the overall knowledge and understanding of all aspects of the department; enabling the employees to set the standards for financial management excellence and customer service. The result is greater financial stewardship within the Navy and Department of Defense.

TECHNICAL EXCELLENCE

Our goal is to institutionalize technical leadership, technical rigor, and discipline to enable consistent quality and efficiency in products and services throughout the organization.





OBJECTIVES

Consistent, on-time delivery of quality products and services

Assert credible technical leadership throughout the Department of the Navy

Leverage cutting edge tools and technologies to increase efficiency and effectiveness





NSWC PCD'S FOCUS FOR TECHNICAL EXCELLENCE

Commentary by Steve Grant, NSWC PCD Deputy Technical Director

What is technical excellence? A simple question, yet for many, difficult to answer. However, if one were to look on the internet, or use an artificial intelligence program, a plethora of different answers present themselves. For Naval Surface Warfare Center Panama City Division, technical excellence has specific meaning and tenets:

- ★ Technical Acumen This refers to the depth and breadth of knowledge our workforce possesses. To meet this, we recruit from the best schools and hire the most competent, journey-level people. Additionally, we assess the progression of this acumen though our annual knowledge stewardship assessment where we identify NSWC PCD's experts journey and entry level individuals. From this assessment, we determine what workforce development training and education are needed to keep our technical acumen strong to support our mission areas. As of today, we have 450 civilians with advanced degrees from 47 of the 50 states.
- Technical Rigor With rigor, we put our acumen to work. Think of acumen as our potential energy, while rigor is our kinetic energy: putting our knowledge into action. Rigor reflects our outward expression of our wisdom; both in word and deed. For this reason, we are assigned our mission areas and sponsors seek our support. For many of us, especially those new to the organization, this can be quite a challenge to apply rigor. However, the command does many things to assist. We have our Competency Proficiency Program, which, through teaching, demonstration, and evaluation, gives common methodology and voice to our rigor. Additionally, rigor also includes finding the right tools, both physical and virtual, to effectively complete our tasking. Our competency leads and department chief engineers (CHENGs) have been successful in engaging, mentoring and qualifying over 100 technical leaders at NSWC PCD. The CHENGs have also identified software tools for our workforce as we push forward with our digital engineering efforts.
- ★ Technical Robustness This aspect of excellence focuses on the quality and timeliness of a product. This ability comes with time where, as a practitioner of rigor, we are able to determine when enough is enough. While there could be more work to do, what has been developed so far is a suitable and adequate solution. This solution also has a built-in quality. To help build up robustness, we often provide long-term temporary duty, rotational and developmental assignments. Recent proof of our robustness was validated in an audit where we achieved a noteworthy Alteration Installation Team grade of above average.
- ★ Forceful Support Two short words, but a difficult concept. This means letting stakeholders know what they are planning to do is not correct or that they have drawn the wrong conclusion with the information provided. While it would be easy to remain silent, we owe it to our sponsors and leaders to speak clearly on what risk they face with their decision. Again, you are not alone in taking a stand; our branch, division, department heads, the technical director and his staff to include Naval Sea Systems Command Technical Warrant Holders, are there to assist.

I want to add that technical excellence does not exclusively exist in NSWC PCD's "technical codes" only. It applies to all of us to include our "business codes" as well. While we practice business, as well as technical, there is a noteworthy overlap between both disciplines.

Finally, our technical excellence has been the hallmark and bedrock of our enduring strategic objective of contribution to the warfighter. We ensure whatever system, tactics, techniques or procedures is of the highest quality to place in the hands of our sailors, marines and fellow civilians.





NSWC PANAMA CITY, BYU DEVELOP AND TEST ALGORITHMS FOR DYNAMIC MULTI-UUV BATHYMETRY LOCALIZATION

By Jeremy Roman, NSWC PCD Public Affairs

Naval Surface Warfare Center Panama City Division (NSWC PCD) and Brigham Young University (BYU) are collaborating to develop techniques that enable teams of unmanned underwater vehicles (UUVs) to cooperatively maintain an accurate, location estimate while operating for long periods of time in submerged scenarios. Through the development of algorithms, this team is enabling these UUV groups to estimate their relative positions and utilize bathymetry to bound localization drift.

"To test these techniques, we are developing a low cost fleet of UUVs based on the Disposable Reusable Expeditionary Warfare Underwater Vehicle (DREW-UV) developed at NSWC PCD. These low-cost UUVs will be used in coordination with BYU's IVER3 UUVs to conduct insite testing of the proposed algorithms," said Dr. Joshua Mangelson, BYU Electrical and Computer Engineering (ECE) assistant professor. "We chose this project because it builds upon our expertise in localization and provides ample opportunities for many students to get involved in Navy-relevant research problems."

Mangelson runs the Field Robotic Systems (FRoSt) Lab at BYU, which is focused on developing perception, localization, and autonomy solutions for marine robotic systems. The majority of FRoSt's projects are Navy-



Brigham Young University Naval Engineering Education Consortium (NEEC) students conduct ballast testing of a custom unmanned underwater vehicle (UUV) in preparation for multiagent testing on this project named: NEEC: Active & Cooperative Terrain Aided Navigation Using Inverted-Ultra-short Baseline. (courtesy photo)

focused and span various specialties to include UUV cooperative localization, sonar-based mapping and localization for UUVs, autonomous unmanned surface vessel (USV) operation in dynamic littoral zones,



Brigham Young University Naval Engineering Education Consortium (NEEC) students display a custom unmanned underwater vehicle (UUV) developed under the NEEC: Active & Cooperative Terrain Aided Navigation Using Inverted-Ultra-short Baseline project. These low cost UUVs will be used in coordination with BYU's IVER3 UUVs to conduct in-situ testing of the proposed, project algorithms. (courtesy photo)

and simulation for marine autonomy development. NSWC PCD is respected in their field for technical excellence in delivering relevant solutions in the littoral (coastal) regions from the seabed to space.

Both Mangelson's group at BYU and NSWC PCD have been developing a partnership over several years; however, this is the first year of collaborations via the Naval Engineering Education Consortium (NEEC) program and this project is named NEEC: Active & Cooperative Terrain Aided Navigation Using Inverted-Ultra-short Baseline.

"We were very excited about this project, as it has cross-cutting Science Technology potential across all NSWC PCD's mission areas of Mine Warfare, Expeditionary Warfare, and Subsea Warfare. Fostering collaborations for undergraduate and graduate research in unmanned maritime systems is a crucial aspect of our talent pipeline," said NSWC PCD NEEC Director Dr. Matthew Bays.

"...working on the NEEC project serves as a reminder that [my] scholarly endeavors have tangible real-world applications, directly impacting human safety and national security. In addition, having the opportunity to visit our sponsoring naval base and see the similarity in our research and agents we use confirmed...that my research is relevant," said Kalliyan Lay, BYU ECE PhD student. "This experience has allowed me to bridge the gap between theory and practical implementation, igniting a sense of excitement in the idea that even my small advances in research can have impactful effects on the real world."

This program offers benefits at every facet and was designed to bring students, teachers and Navy scientists and engineers together to explore current and future technical challenges through project-based research to attract and develop the next-generation of naval engineering talent.

"NEEC provides an opportunity to develop long-term collaborations with NSWC PCD researchers and the excellent work being performed there. I love seeing the excitement on student faces as they realize there is much more they can do with their careers than they previously thought possible," said Mangelson.

Matthew McMurray is a BYU undergraduate student pursuing a degree in electrical engineering and will be interning at NSWC PCD this summer.

"Participating in NEEC...has not only helped me to apply what I am learning in my major to a robotics project, but it also has motivated me to pursue a graduate degree in the future...[and] has given me invaluable experience in solving real-world, relevant problems. Because of NEEC, not only am I able to participate in a research internship this summer, but I also recognize that the project has expanded my view of future graduate and career paths I can take," said McMurray. "I am especially grateful to our collaborators at NSWC PCD for regularly meeting with my group to help us in our research and facilitate our NEEC experience. I look forward to my continued participation in the program!"





Brigham Young University Naval Engineering Education Consortium (NEEC) students preparing an unmanned surface vessel (USV) for field testing. This NEEC project is developing techniques to enable teams of unmanned underwater vehicles to cooperatively maintain an accurate, location estimate while operating for long periods of time in submerged scenarios. (courtesy photo)

POST-TRAUMATIC STRESS DISORDER AWARENESS



Post-traumatic stress disorder (PTSD) can develop after a very stressful, frightening or distressing event, or after a prolonged traumatic experience.



Symptoms

To meet the criteria for PTSD, a person must have symptoms for longer than one month, and the symptoms must be severe enough to interfere with aspects of daily life, such as relationships or work. The symptoms also must be unrelated to medication, substance use, or other illness.



Some symptoms include:

- Elashback
- Distressing th
- Avoiding physical places or thoughts or feelings related to the trauma
- Irritation, anger or aggresive outbursts





- Being exposed to previous traumatic experiences, particularly during childhood
- Getting hurt or seeing people hurt or killed
 Feeling horror, helplessness, or
- reeing norror, nepiessness, or extreme fear
 Having little or no social support
- after the event • Dealing with extra stress after
- the event, such as loss of a loved one, pain and injury, or loss of a job or home
- Having a personal or family history of mental illness or substance use



Treatment



It is important for anyone with PTSD symptoms to work with a mental health professional who has experience treating PTSD. The main treatments are psychotherapy, medications, or a combination of psychotherapy and medications.

If you know someone who may be experiencing PTSD, the most important thing you can do is to help that person get the right diagnosis and treatment. Some people may need help making an appointment with their health care provider; others may benefit from having someone accompany them to their health care visits.



For more information on PTSD, visit https://www.nimh.nih.gov/health/topics/post-traumatic-stress-disorder-ptsd





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Naval Innovative Science & Engineering (NISE) to Capital Investment Program (CIP) transfers

There are a number of ways NSWC PCD funds its efforts and initiatives to best support the warfighter, and two of the more common methods are through the Naval Innovative Science & Engineering (NISE) program and through the Capital Investment Program (CIP). While there may be some overlap between the NISE and CIP programs, there are different criteria and challenges associated with each program. NISE is technically an authority that is typically funded with our command's overhead, while CIP funds are transferred in and recouped through the depreciation process of completed CIP projects. One example of the differences in execution is that NISE funds must be expensed in the year of execution, while CIP funds merely need to be obligated.

Thankfully, there are mechanisms in place that allow flexibility in choosing the best funding type for applicable projects; one such method is a NISE to CIP transfer. NISE to CIP transfers are the result of combining NISE authority with CIP funds and are permitted to fund laboratory revitalization and recapitalization projects, i.e. laboratory infrastructure and equipment. Additional criteria are that the NISE transfer must meet the Chief Technology Officer's criteria for a mission based project; CIP funded projects must have a project cost of at least \$500K and have a useful life of greater than two years; and with permission, unobligated CIP funds can be carried over into the next fiscal year.

Some of the additional challenges in using NISE to CIP funding are the long lead times needed for the formal approval and budgetary process. NISE transfers into CIP must be approved by the Warfare Center Director of Financial Operations, as well as Navy Financial Management & Budget. Additionally, projects should be submitted two years in advance, or there is a risk the division may only have three to six months to obligate the funds.

How is a NISE to CIP transfer completed?

- NISE to CIP transfer requests only occur once a year during the annual budget submit.
- A NISE to CIP Quad chart and Economic Analysis should be submitted to the command's CIP Manager for FY+1 and/or FY+2 projects during annual Investment Guidance data call for CIP; this generally occurs early in the calendar year.
- Ensure construction/safety/environmental/IT/Security/etc. components of each submission are reviewed by respective Division Support Codes prior to submitting to CIP manager.
- NSWC PCD CIP Manager will submit NISE to CIP transfer requests to WFC HQ CIP Manager. NISE to CIP projects must comply with all CIP rules and regulations.
- NISE to CIP transfers must fall into one of four CIP categories: Automated data processing equipment (ADPE), non-automated data processing equipment (NADPE), software, or minor construction.

DEPRECIATION

As mentioned above, CIP is partially funded through the collection of depreciation on completed projects. This is an important distinction that should be remembered when one submits a CIP proposal for consideration. When a CIP project is completed, its status within Enterprise Resource Planning changes as it is capitalized and goes from being an asset under construction to being a final fixed asset. Depreciation begins immediately, is applied monthly, and is calculated in a straight-line manner depending on the category of the CIP project and its anticipated useful life. ADPE and Telecommunications projects will depreciate over five years, Non-ADPE over ten years, Software Development/ Modernization from two to five years, and Minor Construction from 20-45 years. For example, when a \$2.4 million Non-ADPE project is capitalized, it will begin depreciating at a cost of \$20K a month for the next 120 months.

Depreciation expenses have a direct impact on the command's Net Operating Results and will either reduce our command's available overhead funds or will increase the expenses to the project owning Service Cost Center (SCC). Command projects that depreciate against overhead will reduce the amount of overhead our command can spend, and SCC owned projects will likely need the SCC to increase its rates to ensure adequate revenue is being collected to offset the depreciation costs. If a CIP project needs to be retired from service before it has completed depreciating, the remaining costs will be written off which again will have a negative impact to the command's overhead or SCC funds.

Prepared by: Jeremy vonKnoblauch, NSWC PCD CIP Manager / Corporate Budget Lead



LCAC makes a splash at Gulf Coast Salute Air Show

Naval Surface Warfare Center Panama City Division's Landing Craft, Air Cushion (LCAC) vehicle participates in the 2024 Gulf Coast Salute Air Show at the Russell-Fields City Pier in Panama City, Fla., May 3 - 5. LCAC is a high-speed, over-the-beach, fully amphibious, landing craft capable of carrying a 60-to-75-ton payload. It's used to transport the weapons systems, equipment, cargo and personnel of the assault elements of the marine air-ground task force from ship-to-shore and across the beach. This vehicle has created the foundation for the Navy's ship-to-shore connector (SSC), which is an air cushion vehicle whose mission is to deliver surface assault elements in support of operational maneuver onshore from the sea, at over-the-horizon distances, while operating from amphibious ships and mobile landing platforms. (Photos courtesy of Bob Lindee)







SAFETY TIPS *Another Look at Office Safety*

Our safety management system is about managing risks and hazards to avoid people getting hurt or breaking things. In the previous edition of the Coastal Compass we left off with examples of how our office warriors hurt themselves. As with our earlier research, judgment and inattention were the top two leading human factors. Continue to read of some examples and key takeaways from the mishaps of our "Argonauts of Admin."

More Than a Feeling - While moving office furniture in the ship's office, a sailor reached under a desk (without looking) to grab loose cabling and was shocked by a broken Universal Serial Bus (USB) adapter plugged into a surge suppressor. The ship's medical personnel took the sailor to the emergency room, where he received an electrocardiogram and was released later that day. Feeling around under a desk with energized wires is asking for a shock. Take a few extra seconds to see where you are reaching. The broken USB in an energized circuit is a prime example of why office spaces shouldn't be immune from regular safety inspections, and they're required!

A Shelf Too Far - An employee attempted to relocate a printer from an elevated shelf to a desk. As she maneuvered the printer off the shelf, the printer shifted in her grasp and the employee experienced a sharp pain in her lower back. She was later diagnosed with a strained back muscle. —Printers are awkward to lift and often heavy. This employee didn't realize the printer's weight until it was too late. If moving heavy office equipment isn't your regular job, ask for help. It will save you the pain of finding out how heavy printers are the hard way.

Bursting With Flavor - A sailor went to the break room to heat his lunch (noodles). Lacking a proper bowl, the sailor improvised using a "shaker bottle" instead (the ones people make protein shakes in). After placing the noodles and water in the bottle and sealing it, he put it in the microwave for seven minutes—Yikes, seven minutes? The report details the sailor's next steps in noodle-making: removing the bottle, mixing the spicy seasoning and then shaking the bottle to get an even mixture. Once satisfied with the mix, the sailor reopened the bottle and the contents splattered into his right eye. He was treated at the local clinic and prescribed eye drops for the pain. —Sealing up liquid and microwaving it is never a good idea for the very reason our unfortunate sailor demonstrated in this example. While we're talking microwaves, your coworkers will appreciate you not microwaving these items at work: 1) seafood, 2) eggs, 3) broccoli or Brussels sprouts, 4) grapes or anything that will explode. You're welcome.

I Believe That's My Stapler - An employee was using a giant stapler when one of the 1/2" long staples jammed. Aiming to remedy the situation quickly, the employee attempted to pull the staple out with her bare hand. Unsurprisingly, the employee sliced her finger on the staple deep enough that she could not stop the bleeding. She wrapped her finger and reported to her supervisor, who transported her to urgent care, where she received three stitches. —Pulling out a jammed staple with your fingers isn't the safest method. It's probably the least safest method. Download all the staples; if the jam doesn't clear, using pliers are a better option than your fingers.

Key Takeaways

- Safety standards aren't just for operators. Occupational safety standards for office spaces include proper storage, keeping aisles and exits free of clutter, use of power strips and much more. Visit the Naval Safety Command's CAC-enabled site at https://intelshare.intelink.gov/sites/navsafe and select "on duty" then "workplace safety" for simple office safety checklists, tips and training.
- 2 Operational Risk Management isn't just for operators, either. A little risk management could have saved the day in most, if not all, of our examples. We're not saying you need to do a formal risk assessment before moving furniture, but taking a moment to think the task through and consider alternatives could save time and pain.
- Invest in your workplace's safety. Any daily work environment can induce a potentially false sense of safety over time, as we become comfortable with our surroundings. Note the workplace safety tips from takeaway #1 and incorporate them into your daily routine. Workplace safety is everyone's responsibility and should be led by a solid safety program. If you aren't aware of your command's safety program, now is an excellent time to ask.

Prepared by: Patrick Beacom NSWC PCD Safety Specialist





MAY 7 - MR. BRADFORD NEFF, SES DEPUTY DIRECTOR, INTEGRATED WARFARE DIVISION



MAY 8 - NAVSEA SPRING ENGINEERING SUPPORT WORKING GROUP



MAY 16 - OPTIMIST CLUB OF PANAMA CITY



MAY 9 - CHIPLEY HIGH SCHOOL



MAY 21 - NSWC PCD INTERNS



MAY 22 - FSU Society of Military Engineers



MAY 28 - NAVAL AIR STATION WHITING FIELD LEADERSHIP



MAY 29 - Congressman Neal Dunn, M.D. and Professional staffers



JUNE 12 - BAY COUNTY SHERIFF'S OFFICE YOUTH ACADEMY



JUNE 6 - BAY COUNTY SHERIFF'S OFFICE YOUTH ACADEMY



JUNE 13 - NEW HIRE TOUR

US Navy photos by Ronnie Newsome and Eddie Green



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