



NAVAL POSTGRADUATE SCHOOL

UPDATE
NPS

NPS Distinguished Alumnus Congratulates Fall Quarter Graduates, Encourages Continued Applied Education

By MC2 Tom Tonthat

Recognizing the achievements of the latest graduating class, the Naval Postgraduate School (NPS) celebrated its Fall Quarter 2021 graduates on Dec. 17 during a graduation ceremony held inside King Auditorium, and broadcast live on the web around the world.

NPS President retired Vice Adm. Ann E. Rondeau welcomed the graduating class and the family members who joined them for the in-person ceremony.

"I'd like for us to approach this graduation with a heart of celebration for our nation and for ourselves and what we've been able to do to serve that nation," said Rondeau. "You will make your mark upon the service and the organization that you serve. It is not about this Friday. It's about next Monday when you go now and embark upon the work that is expected of you and of us as we continue on our lifelong journey of knowledge."

"As you depart back to your commands, you leave with a great deal of new knowledge – including, most importantly, the ability to think through and solve problems and improvements needed to execute our national security strategy."

-NPS Alumnus, Retired U.S. Army Lt. Gen. Eric P. Wendt

The commencement speaker was NPS alumnus and retired U.S. Army Lt. Gen. Eric P. Wendt, who most recently commanded NATO Special Operations Headquarters before retiring in early 2021. Wendt highlighted how valuable NPS is for education while congratulating the 331 graduates, including two doctoral degree recipients, and nine international students from seven countries.

To read the full story, please visit our [website](#).

NPS Starts Winter Quarter in Distance Learning

After careful consideration of the highly infectious nature of the Omicron COVID variant, NPS has shifted to distance learning for the first two weeks of the Winter Quarter, starting Jan. 3. This precautionary measure will prevent unnecessary infections and ease pressure on the military medical community supporting local commands. Our goal is to resume full in-person instruction on Jan. 18 after assessment of conditions and per future guidance. As always, we appreciate the patience of NPS students, faculty and staff throughout this process. For more information, visit the NPS website at <https://nps.edu/web/safety/coronavirus>.

- p2 NPS' Modeling, Virtual Reality Center Reimagines Navy Training
- p4 Professor Wins Big in "Jeopardy!" Professors Tournament Final
- p5 Graduate Writing Center to Host Academic Skills Workshops

Happy
New Year!

January 2022

NPS' Modeling, Virtual Reality Center Reimagines Navy Training

By Rebecca Hoag

Before making offensive or defensive maneuvers, it's important to run through all the scenarios of what might happen. But when those moves involve massive aircraft carriers and multi-thousand-person crews, it can be a cumbersome, unrealistic task to always rehearse plays and train personnel live.

This is the domain of the The Modeling, Virtual Environments and Simulations (MOVES) Institute, an interdisciplinary academic center at the Naval Postgraduate School (NPS) that works to make it easier for military groups to wargame and practice maneuvers through combined simulation strategies and the integration of artificial intelligence (AI). The institute fosters an open environment for its faculty to explore topics important to the Navy and DOD at large.

"The main thing is to allow people to go off and find problems," says MOVES Director and NPS Research Associate Professor Dr. Imre Balogh.

And indeed they do ...

Christian Fitzpatrick, a 2009 NPS graduate, is a faculty research associate in the NPS Department of Computer Science who has worked with MOVES since 2018. He was recruited to teach a simulations networking class based on his experience in the Marine Corps Combat Development Command and Office of Naval Research (ONR).

His research combines three types of simulations – live, virtual and constructive, or LVC – together to reimagine training. To explain it in video game terms, think of virtual simulations as the character being controlled by the user and constructive simulations being all the other things in the video game that move and act on their own within the video game world, including the bosses. Fitzpatrick and his team of students are trying to figure out how to integrate live simulations, like running a drill, within constructive and virtual simulations.

"Our LVC research goal at MOVES seeks to enable small units on a live range to be able to act and react in response to the activities of enemy forces modeled in the constructive simulation," Fitzpatrick explains. "In addition, we want to integrate supporting units through the integration of virtual simulations. The challenge then for us is passing live operator data back into the constructive and virtual simulators. That's our main research focus."

The team, made up of Fitzpatrick and his thesis students, use Android devices to track the locations of live players in a virtual, constructive event. The Android devices have software applications that provide geospatial displays that can be passed amongst different players. So, if they place a virtual roadblock or other tactical activity somewhere in the training environment, the players can all get live updates on the location and status of it to aid in their scenario decision-making. They might send virtual missiles or a tactical aircraft ahead of their



NPS students in Research Associate Christian Fitzpatrick's Simulation Interoperability Practicum view a simulation and guest presentation in one of the MOVES Institute's laboratories in Watkins Hall. Fitzpatrick's research exploring the integration of live, virtual and constructive simulations together is one of several MOVES efforts advancing the efficacy of training via simulation in the Navy and DOD. (U.S. Navy photo by Javier Chagoya)

live trucks to destroy the threats before they get there, for example.

"The use of these simulations allows you to consider training with units that you might never have been able to live," Fitzpatrick says.

Understanding the ins and outs of LVC is valuable to his students, many of whom will have to conduct their own training as officers.

"Our students are leaving here understanding the whole notion of how LVC works. They get hands-on experience," Balogh says.

Furthering the dynamic nature of simulations is where Fitzpatrick could see his work merging with colleague Dr. Chris Darken's work in the future.

"[Darken] is looking at building entities that can learn over time and be more dynamic," says Fitzpatrick. "That's one of the areas we're looking at potentially integrating these agents into our existing combat simulations so they can be more dynamic and unpredictable."

Darken, an associate professor in the computer science department at NPS, has been a part of MOVES for 20 years, almost the life of the program, and is one of the core researchers looking into what AI and machine learning (ML) can do for operational planning. Darken is supporting the Naval Surface Warfare Center (NSWC) in Port Hueneme to investigate putting AI into operational planning simulations, and has been developing the foundation for this effort with the help of several graduate students he has mentored along the way.

[Story continued on next page]

Their work, similar to AI programs like Google's AlphaStar, looks like little blue dots trying to defend themselves against little red dots to the uninformed, but are doing so within different terrains under different objectives. As the simulation runs over the scenario repeatedly, the computer runs different scenarios, eventually learning the best way to complete the mission with the least number of casualties.

There are many different variables that can be added to this simulation such as how many units each party has, and what the terrain looks like; whether there's a city to defend, and how important defending the city or eliminating adversaries is. The programmer can choose how much of a reward the program will get for completing different activities, thereby creating priorities for the simulation to achieve one task over another. The programmer can also choose to provide negative awards, or basically punish the program for doing certain things. All these will help the program learn to make better decisions as the simulation runs. This approach to ML is called reinforcement learning.

Darken's work has varied implications for the DOD, according to MOVES leaders.

"There's like two different possibilities in what his work can do. One implication is, as we do our training, we often want simulated entities and we want our people to be challenged by those simulations. Right

now, we have to use real people to play the enemy. If we had AI do some of that, it would make it easier to have people do their trainings," Balogh explains. "The other possibility is that it is conceivable, given the techniques that he's using, that people could figure out new tactics that have never been thought about before."

The first possibility lends itself nicely to improving the constructive simulation side of Fitzpatrick's work.

Fitzpatrick is also hoping to integrate secure networks into the simulations so military officials with higher security clearance could start training on simulations containing sensitive information.

"A lot of the units we work with are on secure networks," he says. "That is where they do most of their training ... So we're working to potentially find a way to connect to these secure networks and conduct testing or perform technology insertions into secure live events hosted by the Navy and Marine Corps."

Fulfilling this part of the project would require additional funding to sustain access to higher clearance material. Fitzpatrick hopes to have a program ready for the next Navy Large Scale Exercise planned for 2024.

Naval War College Monterey Program at NPS Celebrates 89th Graduating Class

By Javier Chagoya

The 89th graduating class of the Naval War College (NWC) Monterey partnership with the Naval Postgraduate School for Joint Professional Military Education (JPME) stands for a group portrait in King Auditorium, Dec. 9, following the NWC graduation ceremony.

Through the partnership, a total of 6,275 officers have earned this JPME certification since the program's inception in September 1999.

NWC Associate Dean and Chairman Fred Drake, and NWC College of Distance Education Deputy Director Dr. Timothy Garrold, presided over the graduation ceremony. NPS President retired Vice Adm. Ann Rondeau provided inspirational remarks to the 137 U.S. Navy, Marine Corps, Army and Air Force officers who earned their NWC Command and Staff diploma with JPME Phase I certification for the first quarter of Academic Year 2022.



Students graduating from the Naval War College (NWC) Monterey program for Joint Professional Military Education gather around the NWC banner for a class portrait in King Auditorium, Dec. 9. The 89th NWC Monterey graduating class also marks the end of an era, with the retirement of longtime NWC Associate Dean and Chairman Fred Drake. (U.S. Navy photo by Javier Chagoya)

NPS Professor Wins Big in “Jeopardy!” Professors Tournament Final

By Lt. Cmdr. Ed Early

Who is Dr. Sam Buttrey?

The Naval Postgraduate School (NPS) professor will forever be memorialized as a trivia answer – phrased, of course, in the form of a question – for avid fans of the hit TV quiz show “Jeopardy!”

Buttrey, an associate professor in NPS’ Operations Research department, was the big winner in the inaugural “Jeopardy!” Professors Tournament, which was recorded in Los Angeles earlier this fall and televised Dec. 6-17.

“Of course, I’m gratified to have played well – even recognizing that there is a substantial dose of luck in the game,” said Buttrey, who was on campus Dec. 17 to watch his victory in the tournament’s final episode on TV with other NPS faculty and staff members. “The actual game play was a lot of fun for a big ‘Jeopardy!’ fan like me, too.”

During the tournament, hosted by Mayim Bialik, Buttrey matched his knowledge against 14 other professors from universities and colleges throughout the United States.

After winning his first two matches in the first round and semifinals, Buttrey advanced to the two-day finals against Ed Hashima, a history professor at American River College in Sacramento, and Alisa Hove, a botany professor at Warren Wilson College in Asheville, N.C.

Buttrey compiled the highest cumulative total score during the finals, which were televised on Dec. 16 and 17, and captured the tournament’s grand prize of \$100,000, as well as a berth in the show’s 2022 Tournament of Champions. Hashima, who finished second, earned \$50,000, while third-place finisher Hove earned \$25,000.

“All of us at NPS are extraordinarily proud of Sam for his performance during the tournament and for the way he’s represented our school, the U.S. Navy and Marine Corps, and all of our military students who attend NPS,” said the president of NPS, retired Vice Adm. Ann E. Rondeau. “Like all of our talented defense-focused faculty members, Sam is not just an expert in his field, he is also dedicated to serving those who serve our nation in uniform. As Sam himself has pointed out during the tournament, ‘Just because you graduated doesn’t mean you stop learning,’ and that’s a valuable lesson for all of us.”

It has been a whirlwind two weeks for Buttrey, who said that he enjoyed his time on the “Jeopardy!” set with his fellow professors.

“I think the whole process could have been intimidating, but instead it was like a weird camp holiday punctuated by bouts with makeup technicians and hair stylists,” he said. “The COVID protocols at the taping were very strict, and we weren’t permitted to use our mobile



“Jeopardy!” host Mayim Bialik, left, joins Dr. Sam Buttrey, an associate professor at the Naval Postgraduate School (NPS), after Buttrey won the inaugural “Jeopardy!” Professors Tournament. Buttrey was one of 15 college and university professors competing in the popular TV quiz show’s two-week tournament, which was taped in October 2021 and aired Dec. 6-17, 2021 (Courtesy photo)

phones, so I got to spend a lot of time with the other contestants, and they were uniformly very smart and funny and interested. I made genuine friends, and that’s rare enough in the world.”

In the span of the tournament, Buttrey was not only noted for his quick wit, but also for his uncanny resemblance to comedian Steve Martin – something which was pointed out by multiple social media users and news outlets.

“It’s been very entertaining for me – I can’t speak for Steve,” Buttrey said. “Steve Martin is not only hilarious, he’s also a serious author and talented musician. I have been told I look like him for years, but I think I saw the resemblance most clearly on the ‘Jeopardy!’ cameras. Sadly, though, I never get compared to the famously good-looking people like George Clooney or Brad Pitt or Halle Berry. Still, this instant internet-era fame has been a little weird and a little fun – I don’t expect to experience anything like this again.”

While he will eventually return to the “Jeopardy!” set for the Tournament of Champions, Buttrey is looking forward to a well-earned break for the holidays before returning to school in time for NPS’ winter quarter.

“I think this level of public scrutiny can start to get not just distracting, but exhausting,” he said. “I have no idea how Steve Martin gets through life. I will definitely have enjoyed my 15 minutes of fame, but it turns out that that’s just about the right number of minutes of fame. I’m looking forward to getting back to regular life.”

NPS Graduate Writing Center to Host Academic Skills Workshops

By Office of University Communications

The Graduate Writing Center and the Dudley Knox Library at the Naval Postgraduate School, NPS, have teamed up to bring any and all interested students together and provide more than 40 online seminars over the course of 24 days.

The Academic Skills Workshops will cover a wide variety of topics. From writing for academic journals to mastering note-taking and time management, the seminars provide students with the tools needed to succeed at NPS.

“Our comprehensive suite of workshops quickly gives you practical techniques, proven strategies, and the guided practice needed for academic writing at NPS,” said Aileen Houston, the deputy director of the Graduate Writing Center. “whether coursework, comprehensive exams, project reports, theses, executive summaries, or presentations—and in professional life.”

A few of the more notable courses are:

Mastery Series: Sentences That Sing

(Colette O'Connor, January 12 and 24, Zoom)
To master sentences that “sing” means to write with clarity, vigor, and grace. In this workshop, inspired by advice in Strunk and White’s *The Elements of Style*, a classic grammar how-to, you will be introduced to concepts seasoned writers take for granted, as well as tips and tricks for making your essays...well, melodious. Be bold! Be brief! Be clear! Covered in this class are thesis statements, topic sentences, paragraph structure, active voice, punctuation, ways

to “make every word tell,” and other elements essential to academic papers that sing with strength and flow.

Writing for Online Outlets

(Dr. Kate Egerton, January 21, Zoom)

Do you want to impact broader military and security discussions? Learn to pitch, scope, draft, and revise short pieces for online outlets such as *The Strategy Bridge* and *War on the Rocks*. In this workshop, we will review submission requirements, learn from published writing, and show how writing coaches can help you shape your pieces for these audiences and specs.

Crafting Convincing Arguments: Attack and Defense

(Daniel Lehnherr, January 10 and 20, Zoom)

You employ persuasion every day, but are you comfortable crafting formal academic arguments? This workshop covers the strategies and conventions of written argumentation that are essential to your NPS studies and career. Hands-on exercises help you organize your lines of attack, remedy any gaps in your defense, anticipate your adversary’s counterargument, and deliver the decisive blow through a convincing refutation.

For more information, visit the [workshops](#) page. If the scheduled times don’t work for you this quarter, check out our [recorded workshops](#) and [Quick Clips and Tips](#).

You can view the workshop description and schedule [here](#), and to register for the seminars, click [here](#).



CAMPUS news & notes

Leaders, Good morning.

Another year has drawn to a close and it has been an eventful one! In 2021, the NPS team worked extremely hard and overcame many challenges to successfully continue executing mission in a challenging environment. Although some hurdles remain, the long laborious process of SABRS and CFMS financial systems transition has been stabilized, the Naval Inspector General command inspection is behind us, and we are back to executing in-person classes.

As we move into 2022, we will execute our FY22 [NPS Oversight Plan](#) and continue to build upon our efforts that proved beneficial last year. Notably, there will be some changes to our MIC Program. The program is now known as the DON Integrated Risk Management (IRM) Program, and with the Navy’s internal control strategy maturing, the program will now add a top-down perspective to identify and address Navy enterprise risks while retaining the bottom-up aspect of testing controls within our MIC Program. On a practical level, any changes in the upcoming year will most likely affect the now IRM Coordinators and Senior Leaders can expect additional data calls and taskers. Manager responsibilities of executing and testing internal controls remain unchanged. More to follow!

With great respect and in abiding service.

Ann E. Rondeau, Ed.D.
Vice Admiral, U.S. Navy (Ret.)
President, Naval Postgraduate School

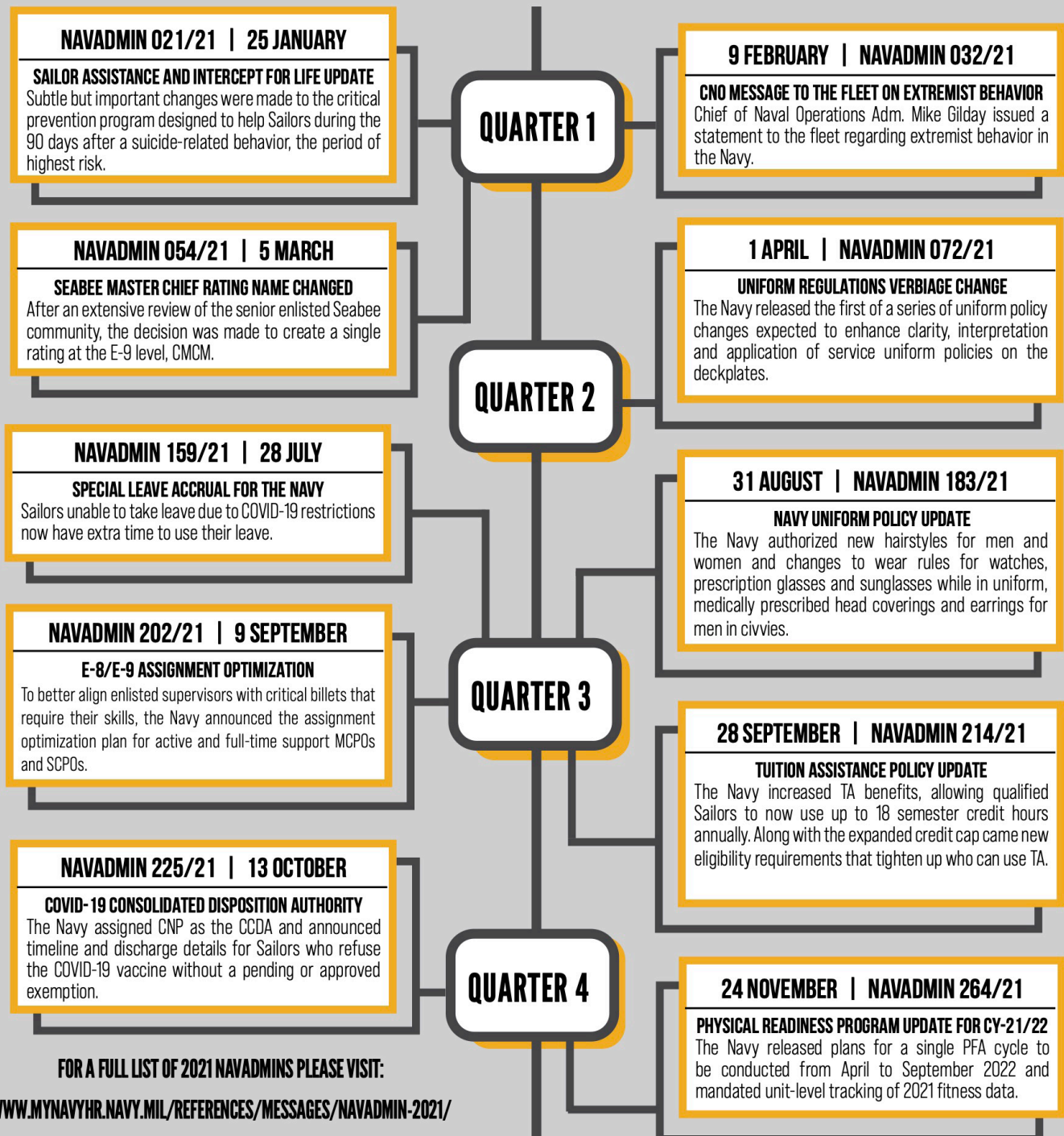
Send your campus news and notes to update@nps.edu.

2021 NAVADMIN YEAR-IN-REVIEW

THE NAVADMINS WE FEEL WILL HAVE THE GREATEST IMPACT ON YOUR CAREER



THIS YEAR CNP RELEASED OVER 275 NAVADMINS. THESE COVERED ISSUES SUCH AS FAMILY READINESS, PRT CHANGES AND COVID-19 POLICY AND VACCINATION GUIDANCE. THESE ARE THE TEN MOST IMPACTFUL NAVADMINS OF 2021.



Any Day at NPS



Chief Navy Counselor Joshua Garnsey, left, receives a Navy and Marine Corps Achievement Medal from NPS Chief of Staff Capt. Philip Old during an Awards and Quarters ceremony, Dec. 16. (U.S. Navy photo by MC2 James Norket)



NPS students participated in an ugly Christmas sweater competition hosted by the President's Board of Student Affairs, Dec. 8. (U.S. Navy photo by Javier Chagoya)



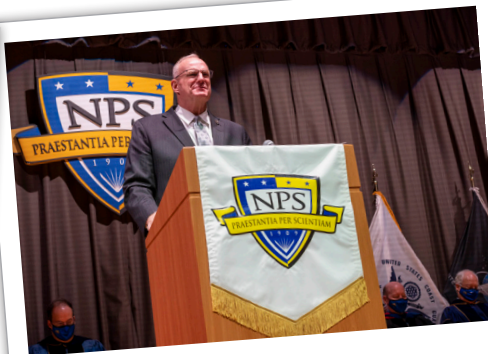
NPS President retired Vice Adm. Ann E. Rondeau, left, NPS Chief of Staff Capt. Philip Old, center, and Clyde Roberson, the Mayor of Monterey, celebrate NPS' 70th year in Monterey with a cake cutting ceremony at Herrmann Hall, Dec. 16. (U.S. Navy photo by Javier Chagoya)



Chief Yeoman Lao Kue, left, receives a Military Outstanding Volunteer Service Medal from NPS Chief of Staff Capt. Philip Old during an Awards and Quarters ceremony, Dec. 16. (U.S. Navy photo by MC2 James Norket)



Chief Electronic Technician Andrew Reagan, left, receives a Navy and Marine Corps Achievement Medal from NPS Chief of Staff Capt. Philip Old during an Awards and Quarters ceremony, Dec. 16. (U.S. Navy photo by MC2 James Norket)



NPS alumnus and retired U.S. Army Lt. Gen. Eric P. Wendt, speaks to the latest group of NPS graduates during a fall graduation ceremony, Dec. 17. (U.S. Navy photo by MC1 Nathan K. Serpico)

STUDENT voice

Happy New Year, Peacocks!

On behalf of our team, we welcome you and hope you had a great Holiday season. The President's Board for Student Affairs (PBSA) is an all-student volunteer organization that **advises the NPS President and support staff, supports students, is active in our community, and aims to enrich the student experience at NPS.** Our team of student-leaders serves as the communication bridge between students and faculty leadership. We will actively seek your feedback throughout your tenure and appreciate your willingness to provide input. In the meantime, you may always share your recommendations anytime through our [Student Recommendations Link](#) or to me directly at domonique.hittner@nps.edu.

Our general student body meeting will be on **January 13, 2022, from 12:00-12:40**, on campus outside of the Dudley Library and on MS Teams. Please email pbsa@nps.edu for the virtual link. Some of our teammates will be there, ready to answer any questions you may have. In January, we will be taking photos for the yearbook. Students, Faculty, and staff may sign up [here](#) or on the Muster page. Let us know if there is anything else we can do to support you.

Here to serve.

Domonique Hittner
Chair, Presidents Board for Student Affairs
<https://nps.edu/group/pbsa>

On campus this month

January 10-13

Center for Executive Education LCSS Seminar
Online



January 17

Martin Luther King Jr.'s Birthday



January 25-28

Center for Executive Education SC Workshop
Online





CULTURE OF EXCELLENCE

HOLIDAY BUDDY CHECK.

HOW ARE YOU DOING?
HOW CAN WE HELP?



MYNAVY HR

Missing the camaraderie and conversation of the Trident Room?

We can help. We believe the Trident Room is an integral and well-known contributor to our NPS academic experience. Student-produced, this podcast is your new destination for illuminating, unfiltered conversation between student hosts and compelling guests.



TRIDENT ROOM PODCAST SERIES

Brewer of stout conversation. Unfiltered and on tap.

Join us online at nps.edu/tridentroompodcast or look for us on Apple Podcasts and Spotify starting July 29, 2020.

