



## Discovery Day at NPS Opens Campus to Central Coast Students

By MC2 Tom Tonthat

In a sight not seen for more than two years, nearly 2,000 students, teachers and parent chaperones from throughout the Central Coast descended upon the Naval Postgraduate School (NPS) for the return of Discovery Day at NPS, May 13, touring the university and interacting with the more than 40 inspirational Science, Technology, Engineering and Mathematics (STEM) venues set up around the campus.

Discovery Day highlights how the university researches and applies the STEM disciplines to its unique mission of defense-focused graduate education and research, with the goal of inspiring visiting students to develop and hopefully pursue their own interests in the sciences.

“Visiting students are going to get a cross-section of the services and NPS’ science displays in action, from physics to robotics to simulations and more, and potentially stir the juices to make them excited to study STEM further,” said U.S. Navy Capt. Edward McCabe, NPS Air Warfare Chair, and this year’s Discovery Day at NPS Chair.

*This is a day of discovery. This is their chance to run out and see science in action and cause a reaction using their own hands, bodies, voice or creativity. Letting them see science in action that they caused themselves can give them the motivation to continue reaching for their goals.”*

*-U.S. Navy Capt. Victor Glover Jr., NASA astronaut*

Groups of students ranging from elementary through high school were guided through the campus by active duty NPS student volunteers to explore and experiment with the various STEM venues manned by volunteer faculty and researchers. Students launched bottle rockets into the sky; piloted ant-weight robots against each other in the Combat Robots competition; tapped into the powers of electricity and magnetism; and, watched art created before their eyes through additive manufacturing.

In addition to the action across campus highlighting the wonder of science, visitors also had the opportunity to see how STEM can help them to reach for the stars. Discovery Day’s special guest, U.S. Navy Capt. Victor Glover Jr., NASA astronaut and an NPS alumnus, was a member of the SpaceX Crew-1 mission, spending 168 days aboard the International Space Station before returning to Earth in May 2021.

Speaking to the audience in King Auditorium, Glover answered questions about being an astronaut and living in space while encouraging students to be resilient, to be good teammates, and to be lifelong learners.

To read the rest of the article, visit our [website](#).

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# Partnerships Support Science, Research Exchange Between NPS, Norway

By MC2 Lenny Weston

Through the Department of Defense's Engineer and Scientist Exchange Program, Naval Postgraduate School (NPS) Permanent Military Professor (PMP) U.S. Navy Cmdr. Thor Martinsen worked with respected cryptography expert and researcher Dr. Tron Omland of Norway's National Security Authority (NSM). Martinsen and Omland are conducting collaborative research at NPS in the fields of cryptography and secure communications, with the intention for both countries to develop improved cyber security systems.

"Working together, sharing ideas, and learning from one another is crucial to realizing scientific advances," said Martinsen.

"So far, the two main aspects of our collaborative research at the Naval Postgraduate School have been one, studying certain classes of mathematical functions that are among the most basic ingredients in the construction of cryptosystems, and two, studying ways of using artificial intelligence, in particular machine learning, to analyze the security of algorithms and ciphers," said Omland.

According to Martinsen, their investigation into the security properties and vulnerabilities associated with Boolean functions is expanding their knowledge of cryptographic primitives and will help cryptographers design more secure systems in the future.

The capabilities of artificial intelligence and machine learning have made them valuable tools for cryptographers, cryptanalysts, and signal intelligence operators.

"Machine learning shows great promise and is quickly being adopted in a host of applications and industries," said Martinsen. "Our adversarial machine learning research focuses on investigating machine learning vulnerabilities and developing safeguards which must be put in place before the Department of the Navy can incorporate this promising technology into its platforms, systems, and networks."

Omland noted the cyclical nature of this research, pointing specifically to the lack of a finish line. Instead, it is a continuous and constant race between creating and breaking cyber security systems.

While Omland's arrival at NPS marked the first time NSM has sent a research scientist to the institution, NPS' partnership with Norway has a solid foundation.

"The Norwegian Navy (special forces) have a long history of attending the NPS Defense Analysis curriculum, which is great," said Martinsen, who added that he hopes to see that expand in other disciplines, especially cyber and network security, in the future.

"For Norway, being a small country with relatively few research scientists, it is especially important to collaborate with our allies, both in terms of research, but also in networking," added Omland.

Martinsen is making his own history in expanding the university's partnerships and collaborations with Norway. In March 2021,



*Through programs like the Fulbright Scholarship and the DOD's Engineer and Scientist Exchange, U.S. Navy Cmdr. Thor Martinsen, right, and Norwegian Scientist Dr. Tron Omland with the Norwegian National Security Authority have been collaborating on advanced cryptography research at NPS, and at the University of Bergen, Norway. (U.S. Navy photo by MC2 Lenny Weston).*

Martinsen was the first NPS PMP to receive a Fulbright U.S. Scholar award to attend the Selmer Center for Secure Communications at the University of Bergen in Norway for the 2021-2022 academic year.

"I'm joining forces with Norwegian research colleagues to undertake important cryptographic and secure communications research," said Martinsen.

Through academic and professional advancement and cross-cultural dialogue, the prestigious Fulbright Scholarship fosters connections with 140 countries worldwide. Program participants pursue graduate study, conduct research, or teach English abroad. Martinsen will be traveling to Norway for 90 days during the scholarship to focus on research within the cryptography field.

"I hope my operational experience as a former Navy cryptologic warfare officer, along with my academic and research skills as a Permanent Military Professor for NPS, prove useful in ongoing research taking place at the University of Bergen," he said. "I am looking forward to teaming with Norwegian colleagues on cryptography and machine learning research of common interest."

Omland mentioned that in all research fields, it is vital to collaborate with new people, explore new ideas and new problems, and seek new experiences.

Martinsen believes exchange programs like these also allow us to connect on a human level by experiencing the people and culture of other countries, so we can better understand and appreciate the viewpoints and concerns of others, which, in turn, bring us together.



# Culture, Partnerships Take Center Stage with Return of International Day

By Javier Chagoya

Following two agonizing years of wrestling with the pandemic and its varied restrictions, the return to a “new normal” has opened possibilities for finally coming together as a community. The Naval Postgraduate School’s (NPS) international students and their families, eager to share their unique and varied cultures, proudly welcomed the return of International Day.

The long-standing annual tradition of NPS’ international students hosting International Day was revived enthusiastically May 7 in the school’s academic quadrangle. Students from 28 nations came together, along with their U.S. counterparts to buoy the festival as an event that unites all countries.

The International Day Festival has been around since the 1960s, and this festival serves both as celebration for its return and turning the page on the pandemic. And despite the limited audience and entertainment venues, visitors were only too excited to join in with the festivities.

This year’s festival was only open to the NPS community, as well as DOD access card holders, military retirees, and their families. However, the enthusiasm and excitement found at the food booths and performances at International Center Stage couldn’t have been better. The day seemed more intimate as friends and families had a chance for longer conversations and activities to share with their children.

Ultimately, it was the food, the music, and the colorful, cultural backdrop that drew crowds who were transported to parts unknown. They were not disappointed. The transformation of scholar turned cook is astonishing as well. With help from spouses and fellow countrymen living in the area, the international students brought rich, authentic recipes that can only be had from the country’s family kitchen.

Each spoonful of food and drink was served with pride and joy as visitors traded purchased, red tickets for scrumptious dishes from an ensemble of menus, tempting taste buds, from savory to spicy to sweet, and sweet and sour – one could walk the length of Root Hall and have criss-crossed the palate of the world. Root Hall was bedecked brilliant with national flags and regional fauna, as one could get a cultural tour from country experts at each booth.

According to International Executive Committee Co-Chair Lt. Col. Kristof Trier of Germany, it’s one of the greatest blessings of his stay in the U.S. that all the delegations can join their American friends in the day-to-day work in exchange of ideas, opinions and laughter, and culture.

“Those common [everyday] things make for greater trust and friendships ...the direct contact, face-to face conversations, are invaluable,” said Trier.

Another fact is that NPS’ international reach continues to grow. Recently, Grenada has been added to the member of countries



*The Ukrainian delegation sings their national anthem during International Day, returning after a two-year hiatus to the NPS campus, May 7. The event provided an opportunity for the school’s community of international students and their families to share their unique cultures through a day of food, family and friendship. (U.S. Navy photo by Javier Chagoya).*

represented on campus. Assistant Superintendent of Police Vah Hercules-Lambert is a student in the National Security Affairs program and is grateful for the opportunity to share foods from Grenada and surrounding region – coconut bakes and saltfish souse, which are popular in her country. She represents leadership from the Organization of Eastern Caribbean States and is proud to be the first representative from Grenada.

Besides food being at the center of the festival, the Yamamoto Hula Ohana Dance Troupe performed with colorful, delicate Hawaiian story telling in dance. The Monterey Bay Taekwondo Demo Team kicked and chopped away at stacked cement slabs as kids watched in amazement at the focused power of a trained hand or foot. There was also the bounce house, arts and crafts tables, Henna hand painting and face painting – the Ukrainian flag being the most popular to be stroked onto a cheek.

The Ukrainian delegation was in force not only with the borscht and cakes, but the entire delegation also played on center stage draped in blue and yellow singing contemporary songs with a finale of the Ukrainian national anthem, “Ukraine Has Not Yet Perished,” bringing the audience to their feet, expressing solidarity.

“I consider having places and events like International Day, where we all can come together and share a beautiful afternoon, as equal human beings, of vital importance, and I am grateful to have been given the opportunity to contribute to this event,” added Trier.

For more sights from the event, check out the [2022 International Day photo gallery](#). (U.S. Navy photos by Javier Chagoya)

# NPS Professor Takes a Deep Dive Into Elected Autocrats

By Matthew Schehl

Russia's invasion of Ukraine left many Western analysts confounded. From a foreign policy perspective, it simply did not make any sense. Even if its "special military operation" proved fully successful, Russia still had more to lose than gain: NATO would draw closer to its borders, the West would impose crippling sanctions, and Ukraine itself would be irredeemably lost from Russian influence.

The key to understanding why Putin invaded Ukraine does not necessarily lie in its foreign policy, but rather in its domestic politics, according to [Aleksandar Matovski](#), assistant professor in the [Department of National Security Affairs](#) at the Naval Postgraduate School (NPS) and Associate at the Davis Center for Russian and Eurasian Studies at Harvard University.

"Most importantly, the share of Russians who wanted Putin to leave office after the end of his current term was trending to surpass those that wanted him to stay," he explained. "As Putin faced the 2024 election ... [And] because constitutional changes had effectively abolished term limits for him, the population was exhibiting very clear signs of 'strongman fatigue.'"

"Against this backdrop, Putin had very few options to try and resurrect his appeal except by starting another conflict," he added.

In his new book, "Popular Dictatorships: Crises, Mass Opinion, and the Rise of Electoral Authoritarianism" (Cambridge University Press, November 2021), Matovski critically examines the rise and dynamics of regimes like Putin's Russia, electoral autocracies that adopt the veneer of democratic institutions only to subvert them to effectively rule as dictatorships.

Rising to power in times of deep socio-economic tension, autocrats promise strong, decisive leadership to provide the stability their country needs. Their mass appeal - not repression, brainwashing or bribery - accounts for their success at the ballot box.

"Quite simply, strongman rule is a very attractive remedy for societies gripped by turmoil," Matovski said. "Majorities desperate for stability yearn for firm-hand leadership, which will overcome institutional paralysis, wipe out corrupt elites and special interests, and bring order and justice."

Their growth since the end of the Cold War has been meteoric.

Fully one-third of the nations of the world today have been consistently run by electoral autocracies, including countries as geopolitically significant as Russia, Egypt, Venezuela, Turkey, Pakistan, Malaysia and Nigeria, Matovski noted.

"By mimicking democracy - allowing multiparty elections, oppositions and somewhat free markets and media - they quite literally kept authoritarianism alive in most places across the world, effectively extending the average life of dictatorships to over 20 years," he said. "And they turned out to be the most effective way to subvert existing democracies."

"The most ominous feature of electoral autocracy is that they allow



*Launched in 2014, an evolving effort by the NPS Department of Systems Engineering provides the Marine Corps Forces Reserve with a comprehensive educational system for active duty Inspector-Instructors, critical personnel in ensuring reserve units are well trained and ready to respond. (Graphic by Marine Corps Sgt. JVonnta Taylor, Marine Corps Forces Reserve).*

authoritarian incumbents to demolish democracy from within: to 'weaponize' their popular support, hollow out institutions and divide societies far more effectively than through blunt repression."

This threat to democracy also presents a clear and present danger to global peace and stability.

With their power dependent on fear of crises, "strongmen" begin to lose their mass appeal both if they fail and - paradoxically - if they succeed in stabilizing their countries.

"Why would people tolerate the restrictions and unwholesome nature of authoritarian rule if their countries were stable and there was no need for strongmen to protect them against danger and dysfunction?" Matovski said. "To survive, electoral autocracies must maintain - or manufacture - the cries and conflicts that legitimize their rule."

Vladimir Putin, who came to power with the promise to "raise Russia from its knees" following the turbulence of the post-Soviet 1990s, faced his first serious challenge by popular revolt in 2011-12 when he insisted on staying in power despite having stabilized the country.

To remedy this, he orchestrated the annexation of Crimea and the conflict in the Donbass - framing both as part of an existential conflict with the West - to resuscitate his image as Russia's indispensable strongman and to demobilize domestic opposition to his rule, Matovski said.

"Other electoral autocracies have mastered the use of brutal anti-insurgency, anti-terror, anti-crime and anti-immigration campaigns to sustain a sense of persistent threat that justifies their rule," he continued. "Still others, like Venezuela's Chávez and Turkey's Erdoğan, have staged diplomatic spats and disputes - often aimed against more powerful countries - to bolster their strongman credentials."



# NPS Students “Hack The Port” at Maritime Cybersecurity Conference

By Lt. Col. Michael Senft

Five students from the Naval Postgraduate School (NPS) and their faculty advisor recently attended the inaugural Maritime and Control Systems Cybersecurity Conference, known as “Hack the Port 22,” which took place in Fort Lauderdale, Fla. and online from March 21-25.

The students, representing NPS’ Cyber Systems and Operations (CSO) program, were supported by the school’s Center for Cyber Warfare (CCW) and the National Security Agency’s National Centers of Academic Excellence program. During the conference, the NPS team participated in a Virtual Cyber Exercise Competition, testing the security of a fictional port.

NPS’ contingent was led by U.S. Army Capt. Paul Baker, a cyber warfare officer in the CSO program, and included U.S. Navy Lts. Daniel Batista, Matthew Finley and Seth Kyler and Scholarship for Service student Paul Duhé. U.S. Army Lt. Col. Michael Senft, a military faculty lecturer in the Computer Science Department, served as the faculty advisor for the team.

The joint service team which participated in the event reflected the diverse, interdisciplinary expertise available through the unique graduate education environment provided by NPS. It also illustrated the teamwork needed to holistically approach problems as complex as port security.

Ports are a vital intersection between the land and maritime warfighting domains, which are further connected by the domain of cyberspace. The “Hack the Port 22” event, conducted by the Maryland Innovation and Security Institute and DreamPort, helped to highlight these facts by bringing together representatives from military, government, academia and industry to raise awareness of cybersecurity challenges facing the maritime sector.

The event featured speeches, lectures and panel discussions from government and industry leaders, as well as the cyber competition with more than 30 higher education academic

institutions participating. Keynote speakers included Secretary of Homeland Security Alejandro Mayorkas; National Cyber Director Chris Inglis; Jen Easterly, director, Cybersecurity and Infrastructure Security Agency; and, Lt. Gen. Charles L. Moore, deputy commander of U.S. Cyber Command (USCYBERCOM).

“Attending the conference brought home the importance of what we’re learning in our CSO program,” said Kyler, an intelligence officer in the CSO program. “We can sometimes get lost in academic projects but interacting with professionals in the cyber community and learning about the challenges they face, helps to refocus one’s attention on the overall picture, and the impact we can have by learning and honing technical cyber skills.”

This sentiment was echoed by Baker.

“Overall, the conference provided us a broader framework for our cyber-related thesis research topics,” he said.

Batista, a submarine officer in the CSO program who participated in the Virtual Cyber Exercise competition, highlighted the opportunity for hands-on training.

“Hack the Port 22 allowed our team to use open-source tools for scanning targets, finding vulnerabilities and gaining access and privileges on modern systems currently deployed within port facilities and ships,” Batista said.



*An NPS team participates in the inaugural Maritime and Control Systems Cybersecurity Conference, known as “Hack the Port 22,” held in Fort Lauderdale, Florida and online. The event brings representatives from military, government, academia and industry to raise awareness of cybersecurity challenges facing the maritime sector. (Courtesy Asset)*

## CAMPUS news & notes

Team NPS,

Greetings to the NPS Community. In the daily hustle and bustle of executing our mission, we occasionally lose sight of the many positive things ongoing across the university and campus. One such positive thing is the manifestation of investment in NPS in the area of our facilities and infrastructure. As you can see each day, the construction of a new Café Del Monte is progressing and the complete renovation of Bullard Hall is underway. In addition, there are a number of facility improvement projects underway with which you may not be familiar.

We are enormously enabled in all of these projects through the expert services of our own Facilities Management team, led by Ryan Stewart, and persistent and resilient NSAM leadership, who in turn, is supported by Navy Region Southwest (located in San Diego), as well as by those who approve and fund these projects through CNIC (Commander, Navy Installations), SecNav staff (ASN (Energy, Installations and Environment)) and the Navy’s budget approving teams and, ultimately, Congress. Facilities improvements in our global Navy require many arduous and detailed processes to both obtain funding and ensure that we are all very good stewards of the American taxpayer’s money. I am grateful for all those who help make these projects possible.

**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](mailto:update@nps.edu).**

# Vice Chief of Naval Operations Talks “Get Real, Get Better” During Latest SGL at NPS

By MC2 James Norket

Vice Chief of Naval Operations Adm. William Lescher spoke to Naval Postgraduate School (NPS) students, faculty and staff about the Navy’s “Get Real, Get Better” initiative and how the Navy plans to stay ahead in today’s era of strategic competition during the latest Secretary of the Navy Guest Lecture (SGL), May 4.

Lescher, an NPS graduate who completed his master’s degree in aeronautical engineering while attending the Naval Test Pilot School, spoke about the Navy’s path forward as it transitions from supporting troops deployed into a land-locked region to addressing near-peer competitors such as China and Russia.

“We are going through a change in our strategic context,” said Lescher, who has served as VCNO since May 2020. “We are pivoting from supporting forces ashore for the last 20 years to the new challenge of great power competition.”

Lescher then turned to the emphasis of his message to the NPS community ... detailing the Navy’s “Get Real, Get Better” (GRGB) initiative, first announced by Chief of Naval Operations Adm. Michael Gilday in January 2022. GRGB is a call to action for every Navy leader to apply a set of Navy-proven leadership and problem-solving best practices that empower personnel to achieve exceptional performance.

Gilday shared more about the effort at the recent 2022 Surface Navy Association Symposium.

“History shows the navy which adapts, learns, and improves the fastest gains an enduring warfighting advantage. The essential element is fostering an ecosystem – a culture – that assesses, corrects, and innovates better than the opposition,” he said.

The GRGB initiative plans to do just that.

Over the last several years, upper-echelon Navy leaders have spent countless hours observing and taking notes on industry leaders outside of the Department of Defense (DOD) in an effort to improve the Navy’s warfighting ability. They have worked with commercial airlines and studied their maintenance routines and how they consistently have their planes ready. And they have monitored corporate giants like Microsoft and learned how they get technology and innovation moving forward.

“We’ve spent the better part of four years thinking hard, with our heads down, quietly learning about how we can make the Navy better,” Lescher said.



*U.S. Navy Adm. William Lescher, Vice Chief of Naval Operations, briefs NPS students, faculty and staff about the Navy’s “Get Real, Get Better” initiative during a Secretary of the Navy Guest Lecture (SGL) Series in King Hall, May 4. (U.S. Navy photo by Javier Chagoya)*

After several years of learning, the Navy created the GRGB structure.

“First, the Navy must get real,” Lescher said. “We have to self-assess and be our own toughest critics. We need to be honest about our abilities and be fully transparent about our performance. Once we ‘embrace the red,’ we will be able to identify solutions and more realistically predict our mission readiness.”

“Secondly, we must get better,” he continued. “We need to be able to self-correct by continuously fixing small problems at the lowest level before they become a large issue. We must identify and fix root causes rather than adapting to issues that arise. And we need to clearly identify people who are accountable at every level.”

After his presentation, Lescher fielded several questions from NPS students regarding the details of the new program and how they can affect change as mid-career officers advancing their effectiveness through graduate education.

More than once, Lescher reiterated to students that they should be courageous, speak truth to power, and be a driving force forward to make the Navy’s processes and assets serve as examples of “world-class performance.”



# Any Day at NPS



Mass Communication Specialist 2nd Class Tom Tonthat, left, receives a Navy and Marine Corps Achievement Medal from NPS Chief of Staff Capt. Philip Old for his accomplishments during his time stationed at NPS. (U.S. Navy photo by MC2 James Norket)



Students experiment with virtual reality technology in the Robo Dojo on Discover NPS Day, May 13. (U.S. Navy photo by MC2 James Norket)



Chief Navy Counselor Joshua Garnsey, left, receives a Navy and Marine Corps Commendation Medal from NPS Chief of Staff Capt. Philip Old for his accomplishments during his time stationed at NPS. (U.S. Navy photo by MC2 James Norket)

## STUDENT voice

Hello, Peacocks!

Finals week is upon us! On behalf of the President's Board for Student Affairs (PBSA), thank you for your support with Discovery Day, International Day, and the Memorial Day Retirement Home Visits. We are looking forward to a recognition event thanking everyone that supported Discovery Day. The PBSA's main goal is to support all students on their journey to graduation. With your feedback, we serve as the communication bridge between students and staff to make immediate improvements to the NPS experience. The team and I look forward to hearing about your experiences and are always available for you.

This month we will be hosting an NPS Beach Clean-up at the beach adjacent to the Del Monte gate on Saturday, 4 June 2022 from 0900-1000 (no registration required). The whole family is invited, and we will bring free donuts! Our general student body meeting will be on Thursday, 9 June 2022, from 1200-1240, on campus outside of the Dudley Knox Library. During this time, we receive any student support needs (childcare, summer camps, tutoring support, policy updates) and recommendations for upcoming events. Please email [pbsa@nps.edu](mailto:pbsa@nps.edu) if you are unable to attend and would like an update. To register for many other volunteer opportunities-click [here](#). Upcoming events include the Veteran Transition Center's Stand Down and Car Show, an upcoming Army vs. Navy Tug of War competition in July, Spirit Week, and the End of Summer BBQ. We look forward to seeing you soon and good luck with your finals!

**Domonique Hittner**  
Chair, Presidents Board for Student Affairs

<https://nps.edu/group/pbsa>

# On campus this month

## June 6

SGL - Mr. Jason Zander, Executive Vice President at Microsoft

Online / 3:00 p.m.

## June 7

The Need for U.S. Seapower in a Challenging World

Glasgow 109 / Online / 12:00 p.m.

## June 17

Spring Quarter Graduation Ceremony

10:00 a.m. | King Hall



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