NPS Student’s Award-Winning Thesis Helps Naval Station Newport Prepare for Hurricane

By Rebecca Hoag

When an extreme weather event hits, emergency preparation and procedures get put to the test, and so does the cohesion of multiple areas’ evacuation plans. A lack of communication between cities, or between military bases and their local communities, can result in less road accessibility than either party planned for and less room in shelters than anticipated.

To avoid these kinds of scenarios from happening, the DOD Office of Economic Adjustment, renamed the Office of Local Defense Community Cooperation in 2021, awarded a grant to the City of Newport on Aquidneck Island in Rhode Island, and its resident naval base, to develop coastal resilience plans in collaboration with Naval Station (NAVSTA) Newport, the U.S. Naval War College, and University of Rhode Island. The 18-month Military Installation Resilience Review (MIRR) was led by the University of Rhode Island Professor of Marine Affairs Dr. Austin Becker.

Around the time the grant was presented, U.S. Navy Lt. Cmdr. Amanda Jones was looking for a thesis topic to complete her Naval Postgraduate School (NPS) master’s degree in Operations Research (OR). She wanted her thesis topic to be useful to people both in and out of the Navy, having worked in logistics and humanitarian planning for the Federal Emergency Management Agency (FEMA) before coming to NPS.

After speaking with a colleague who did his thesis on hurricane preparation in the U.S. Virgin Islands with Dr. Daniel Eisenberg, Assistant Professor of Operations Research at NPS, and Deputy Director for the university’s Center for Infrastructure Defense (CID), and Dr. David Alderson, Professor of Operations Research and Director of the CID, she felt doing something similar was the right fit for her. Eisenberg directed her focus towards collaborating with the Newport MIRR effort.

As it turned out, Jones’ work on the installation resilience review ended up being applicable much sooner than anyone anticipated when Hurricane Henri threatened the area in August of 2021, the first storm to make landfall in Rhode Island in 20 years. Suddenly, Jones, Alderson and Becker’s team found themselves informing the Newport base on best evacuation and preparation procedures before Jones’ thesis was even published.

To read the full story, please visit our website.
This Fall, the Naval Postgraduate School (NPS) successfully completed a two-year collaborative effort to take Distance Learning (DL) to the next level of quality in meeting students’ emerging needs.

The Teaching and Learning Commons’ (TLC) Distance Learning Quality Initiative (DLQI), led by the Office of Teaching and Learning (OTL), introduced modular standards of best practices for course development, instruction and the application of technologies to enhance DL programs throughout the NPS campus.

“What I like about these quality standards is that they enable those engaged in online instruction to better communicate, interact and engage with students,” said Ali Rodgers, Director of Faculty Development and the Office of Teaching and Learning. “How do you monitor learning and instruction in terms of collaboration, communication and feedback in a web-based environment? Do you have the correct technological resources and funding? Do you have sufficient support staff?”

“DLQI provides that,” Rodgers added.

NPS has a solid history of providing DL education stretching back more than two decades. Yet even the most experienced of educators often find it challenging and time-consuming to create effective and engaging learning experiences for their students.

“We’re looking to expand our DL presence to offer more online, and that entails how we develop and design cohesive learning experiences across a set of courses,” Rodgers observed. “Quality standards provide a really good framework to support quality learning experiences.”

Supported by the Graduate Education Advancement Center, the OTL set out in September 2019 to begin formulating DLQI.

The project was conceived in two phases. The first phase would introduce best practices for course development, instruction and the application of presentation, communication and collaborative technologies to enhance DL programs. Phase two, designed for program managers and academic associates, would introduce a systematic needs assessment and program review process.

“The impetus for DLQI was really our desire for continuous improvement of the faculty here,” noted Dennis Lester, Director of Graduate Education Advancement and Associate Provost for Graduate Education at NPS. “We recognized that this was an area the TLC could enhance and improve upon to meet the growing emphasis on DL and the anticipated future of NPS in a more flexible way.”

Then COVID hit. Overnight, the project became an absolute exigency and the TLC swung into action.

“In response to the rapid switch from resident to DL, the TLC is supporting learning-focused communities of practice and is providing leadership and resources as NPS goes fully all-in and online,” Raluca Gera, then TLC director and Associate Provost for Graduate Education, commented at the time.

In consultation with NPS faculty and staff, the GEAC researched exemplary, research-based DL practices used at leading educational institutions throughout the world to meet standards for evaluation and accreditation as well as legal requirements for accessibility. It grouped the most important elements into a quality standards checklist of eight categories faculty could reference.

This included course preparation, content organization, learning outcomes and assessment, student engagement, course website design and navigation, teaching and learning technology, use of media and accessibility. The group also compiled these in a DLQI handbook for reference.

“Our goal was to create a set of guidelines that would be comprehensive enough to include the features that most contribute to student success, but flexible enough to accommodate a wide variety of learner needs, program goals, technology tools and teaching styles,” Lester recalled. “We had to do an immediate transition, and I was particularly impressed that people just rolled up their sleeves to figure out how to make this happen.”

The group enlisted a nominated cadre of faculty to formally test the guidelines out for the first phase of the project.

From March through September of 2020, seven faculty members from a broad swath of academic disciplines utilized the checklist as they swung into mandatory DL instruction, designed, and taught their courses. They then provided frank feedback on what worked, and what didn’t.

“The pilot allowed faculty to assess their courses using quality standards and to identify next steps to enhance learning and instruction,” Rodgers said. “Everybody had a common experience using the standards, which was the intention of the program.”

[Story continued on next page]
“As I look back on the experience, I think we got some really good data from our faculty,” she continued. “I think the faculty recognized the value and felt good knowing that these quality standards exist and that they’re doable.”

Armed with this input, the OTL then implemented the second phase of the project.

From May through September 2021, phase two piloted a standards-based and systematic needs assessment and review of degree and certificate programs by select academic teams. In doing so, it looked at integrating and embedding educational technologies to achieve learner outcomes and leveraged some of the aggregate principles of adult learners to allow for choice and self-pacing as a student moves throughout a curriculum.

“This provided opportunities for people to talk about learner needs and to share ideas about what we could and should be doing with our students … Specifically, what our students are capable of doing on their own versus things that need a lot of guidance and informal coaching,” Rodgers said.

As in-person classes resume, Rodgers and Lester hope to continue to roll out the DLQI program and expose more faculty to it, enabling them to consider how offering some or all of their coursework as a DL component might most benefit their students.

“I’ve got a feeling that with these standards and best practices we’ve come up with, real outcomes will show the merit in implementing them,” Lester said. “I think that’s where we’ll see the TLC moving soon.”

For more information about NPS’ Teaching and Learning Commons, and to review the 2021 TLC Annual Year in Review, visit the TLC website.

“HAI 2.0” – NPS Releases Updated Artificial Intelligence Course, Video Series

By MC2 Lenny Weston

From its beginnings in 1956, the field of Artificial Intelligence (AI) has been on a quest to build computers that perform intelligent tasks, and possibly computers that are intelligent. Early AI began with a variety of tasks such as checkers and chess, speech recognition, language translation, and solving word problems. Over the years it has progressed to give us automated vacuum cleaners, robot dogs, Siri and Alexa, image recognizers, Chess and Go world masters, self-driving cars, and self-guided drones.

These technologies have powerful impacts on Naval operations and warfighting as well. AI has the potential to revolutionize military technology, capability and operations. The possibilities have raised many speculations about what AI is capable of and whether it can be trusted.

The Naval Postgraduate School (NPS), looking to shed some light on this topic for the many newcomers to AI technology, developed a seminar course and accompanying video series called Harnessing Artificial Intelligence, or HAI. A popular course among NPS students on campus, the materials are also being used by the DOD’s Joint Artificial Intelligence Center (JAIC) to support its own education programs.

The video series, upgraded for 2022, was developed by NPS Distinguished Professor Peter Denning, a leading name in the computing field. It features 22 lectures by 18 different NPS faculty experts on AI topics including automation, machine types, primary applications, strategy, ethics and futures.

“The AI field has traditionally claimed far more than it was able to achieve. This tendency to hype the technology is not safe for the national defense. It tempts planners and developers to expect more than the technology can deliver,” explained Denning.

“We designed this course to give a clear picture of what AI machines can actually do and the applications in which they have been successful,” Denning continued. “We also discussed the role of AI in geopolitical power competition and the ethical principles our country and others are using when applying AI. We concluded with a look at the future of warfare when AI technologies are an integral part.

“We want to give people a solid foundation to enable them to understand what these machines are capable of, what kinds of mistakes they can make, and when they can be trusted,” Denning stressed. “These lectures can dispel the hype.”

“The biggest benefit of the series is to provide a basic understanding of concepts that are often overhyped by the news media,” added NPS Computer Science Professor Neil Rowe. “Students discover that artificial intelligence does not solve all problems … but it does provide new tools valuable for addressing certain problems important to the military. We have considerable, unique expertise in artificial intelligence at the school, and the course takes advantage of it.”

While the lectures were attended in-person by NPS students, the education and value they provide are reaching across the entire DOD through NPS’ partnerships with the JAIC. NPS Computer Science Associate Professor Mathias Kölsch has established a connection between NPS and the DOD’s AI hub.

“We realized that this cannot be the only effort to educate the DOD workforce, which means we need to make this a multi-institution effort,” noted Kölsch. “NPS contributes with its own expertise, which is graduate-level education.”

As the technology progresses within AI, NPS will look to continue moving forward with the series by updating the lectures and videos, which will focus on new trending topics. NPS will also partner with other institutions within the DOD and civilian sectors to make the best possible content for users, while distributing it to larger audiences.
The world’s largest international climate conference COP26 took place in Glasgow, Scotland in late 2021, where senior international and industry leaders discussed methods to reduce greenhouse gas (GHG) emissions and prepare for life in a potentially warmer world.

With combating climate change noted as one of Secretary of the Navy Carlos Del Toro’s top priorities in his October 2021 guidance, the Naval Postgraduate School’s (NPS) Climate and Security Network invited Jennifer DeCesaro, Director for Climate Security and Resilience at the National Security Council, and Erin Sikorsky, Director for the Center for Climate Security and the International Military Council on Climate and Security, for a virtual discussion following COP26 to share their own views on the event with NPS faculty and students, as the university deepens its contributions to the SECNAV’s strategic priority.

NPS Faculty Associate for Research Kristen Fletcher began the discussion emphasizing some of the main topics deliberated at COP26: coal, finance, methane and deforestation. More than 40 countries signed an agreement to phase down coal in electricity generation. More than $130 trillion of private capital from over 45 countries was committed to help progress the clean energy transition, but funds to specifically help developing countries transition was not clarified. The U.S., European Union, and more than 100 other countries representing 70 percent of the global economy pledged to reduce methane emissions. In addition, more than 100 countries pledged to halt and reverse deforestation by 2030, representing 85 percent of the world’s forests.

Sikorsky shared her four main climate and security takeaways from the summit. First, climate change must be looked at as both a current and future problem and be addressed using both adaptation and mitigation methods. More specifically, she referenced President’s Emergency Plan for Adaptation and Resilience (PREPARE), which aims to support developing countries and vulnerable communities transition to clean energy and properly prepare for climate change.

Second, the military must further analyze the security risks and impacts, particularly looking at how countries like India and China will be impacted by climate change and their motivations for addressing the issue.

Third, Sikorsky said, the military needs a better understanding of how climate change may destabilize governments, potentially providing an opportunity for terror organizations and unlawful activity to surge.

And finally, she noted that the military should think about opportunities for the U.S. and the DOD to expand and lead in investing in clean energy technology and reducing emissions. Technological innovation often starts in the DOD, and the government as a whole has significant purchasing power that may speed up mass adoption of clean technologies.

Ultimately, the discussion is intended to assist students and faculty with identifying potentially impactful areas of study and research.

“I thought her comments were right on target and gave us a lot to consider in our educational and research roles,” Fletcher said.

“With combating climate change noted as a critical priority in SECNAV Carlos Del Toro’s Oct. 2021 Strategic Guidance, NPS’ Climate and Security Network recently held a post COP26 discussion with senior leaders in the climate security field to help students, like Lt.j.g. Kianna Myles, define research and thesis topics that advance NPS’ impact on this strategic priority. (U.S. Navy photo by Javier Chagoya)“

As a whole we have to get out of our reactive mentality and instead take a more proactive approach, especially if we want to stay ahead of our adversaries,” she says. “On a strategic level, it has to be important because if it’s not important on a strategic level then it does not trickle down to the tactical and operational levels.

“For example, I’m going to assume duties as a logistician. Military conflicts are becoming more reliant on logistics as it relates to shipments and personnel, equipment, resources to remote locations … Logistics is a big part of that,” Myles explains. “Effective logistics strategy could either mean the mission fails or succeeds, and when we think about it, things like climate security impacts our ability to effectively perform those types of logistics operations.”

The discussions broadened to provide NPS faculty participating in the effort to share their own perspectives on notable outcomes from COP26. One of the panel members, NPS Meteorology Research Associate Professor Tom Murphree, said that this was the first COP that didn’t seem to center around the uncertainties of climate science, and wondered if this was due to an increase in extreme weather events and the media’s rapid attribution of those events.

“We have climate change attribution science that’s really strong and rapid, and so the media is getting excited about reporting climate change information because now they can take the disaster and turn it into a climate change story,” Murphree says.

NPS Professor Nick Dew noted how socio-economic pressures may prove to be the catalyst for change that the political system has yet to be.

[Story continued on next page]
NPS Joins USCYBERCOM Academic Engagement Network

By NPS Public Affairs

The U.S. Cyber Command (USCYBERCOM) has selected the Naval Postgraduate School (NPS) to join its Academic Engagement Network (AEN), a select partnership of more than 80 colleges and universities throughout the United States.

The AEN is an alliance of public and private academic institutions collaborating to support and enhance four USCYBERCOM lines of effort: future workforce, applied cyber research, applied analytics and strategic issues. USCYBERCOM announced its initial AEN partners on January 5, 2022.

“Selection of the Naval Postgraduate School to be an inaugural member of the USCYBERCOM Academic Engagement Network is a great honor,” said Dr. Cynthia Irvine, NPS Distinguished Professor of Computer Science and director of the Center for Cybersecurity and Cyber Operations. “It serves as a wonderful acknowledgment of the high quality and ability of the people and programs at NPS to contribute materially to the cyber workforce through education and research.”

NPS is one of 84 civilian and military academic partner institutions forming the network.

Other AEN partners include the U.S. Naval Academy, National Defense University, the U.S. Army War College and the University of California, Santa Cruz.

By participating in the AEN, NPS faculty will help advance the Department of Defense’s ongoing strategic dialogue by engaging with counterparts from USCYBERCOM, Fleet Cyber Command/U.S. Tenth Fleet and other DOD cyber commands.

For three decades, NPS has been a leader in military-focused cybersecurity and cyber operations education and research. It is one of a small group of universities holding three Center of Academic Excellence designations from the National Security Agency – cyber defense, cyber operations and cyber research. Cyber programs at NPS benefit from the expertise and military focus of its faculty in areas ranging from cyber strategy and policy, technical topics related to mathematics and cryptography, hardware and software, networking, and communications.

For more information about the USCYBERCOM Academic Engagement Network and its partners, visit the AEN website.

Send your campus news and notes to update@nps.edu.
Iconic names, such as literary giants Gertrude Stein and Alice B. Toklas and aviation pioneer William Edward Boeing, are just a few of the visitors signed into a recently discovered 1920 registry for the legendary Hotel Del Monte, revealing again the grand reputation of the Monterey landmark that is now home to the Naval Postgraduate School’s Herrmann Hall.

The Hotel Del Monte Guest register from the 1920s, which found its way to NPS’ Dudley Knox Library (DKL) Special Collections and Archives, includes an impressive array of notable signatures and glowing commentaries from guests, standing as a testament to the glory days of “the finest hotel resort west of the Mississippi,” as it was promoted in the early 1900s.

While other Hotel Del Monte registers exist, this one was unlike the official hotel register guests would pen their names to as they checked into the hotel. The finely bound, rust-colored register is in remarkable condition with entries beginning in the mid-1920s through the 1930s. There are other prominent names of the era included, like American mining engineer, diplomat and philanthropist John Hays Hammond, with more bound to be found as this unusual and not entirely official registry of the hotel is further examined.

The recently acquired Hotel Del Monte Guest register was received as a gift from a member of the community to the Monterey Public Library (MPL). The local history circle caught word of it, including former NPS Public Affairs Officer John Sanders, a well-known figure on campus who also served with the DKL as the university historian.

Sanders reached out to MPL’s California History Room Librarian Sean Briscoe with a recommendation to consider having the register added to the NPS special collection, which curates unique ephemera from the hotel years, 1880-1942. This led Briscoe to DKL Digital Services, Special Collections and Archives Librarian Irene Berry.

“The book is a valuable addition to the Dudley Knox Library’s Special Collections and Archives, which includes archival collections that focus on the history of NPS and the two Navy commands established on this site during World War II, the Del Monte Pre-Flight School, and the Naval Technical School, Del Monte,” said Berry.

“The library’s Hotel Del Monte collection includes photographs, artifacts, and memorabilia in honor of NPS’ historic site,” she continued.

While ephemera, relics, murals, furnishings, and a masterpiece diorama by artist Jo Mora from the hotel years remained intact following the Navy’s purchase, there have also been donations to NPS from locals who worked at the hotel, including an official hotel register, also filled with the names of famous patrons. So, what is the story with this one-of-a-kind piece?

The register belonged to long-time hotel resident Mrs. Henry Clay Quinby, who was herself considered a local celebrity and a person of great charm. She held tea socials in a salon setting in her private rooms, according to Keeler’s Hotel Weekly, a publication that covered the hotel industry at the time. Quinby would live in the hotel for nearly 30 years and was quick to make friends with many of the visiting guests and would have them inscribe and autograph in her own special register. One visitor even penned a special poem about their visit.

“Mrs. Quinby’s husband, Henry Clay Quinby was the jeweler at Hotel Del Monte for many years. The couple lived onsite, and she was invited to stay on after his death in 1908. Her apartment became quite the ‘salon’ for distinguished guests and friends from around the world,” said Berry.

“Upon the 21st anniversary of her residence, in 1922, she was honored with a ‘tea’ given by her friends in [what] I speculate was the origin of this register book,” Berry added. “She was more than a guest. Mrs. Quinby was instrumental in the establishment of St. John’s Chapel (relocated across Highway 1) and was known for her dedication to charitable work.”

For Berry, the register is yet another special piece of NPS history that helps the campus community revel in the truly unique history of the university and the facilities it occupies.

“The NPS archives, both the physical Special Collections and on the digital side, Calhoun - NPS’ Institutional Archive - are what I do for NPS, and I want to be sure readers know that there is a real, relevant reason we care about this book,” she said.

The resurfacing of Quinby’s unique keepsake register serves as a portal into the compelling history of the university’s home. See some of that history for yourself with the History of Hotel Del Monte digital collection on Calhoun at https://calhoun.nps.edu/handle/10945/47633.
Hello, Peacocks!

We welcome you back to campus and hope you are well. In case you are not, the President’s Board for Student Affairs (PBSA) is here to help. Our all-student volunteer organization helps close the communication gap between students and the support staff as well as advises the NPS President on issues that affect students. The dedicated leaders on the PBSA aim to support all students and form a community connection on and off our beautiful campus. We take your feedback, redact your private information, and provide reprisal-free recommendations to support NPS students. You never need to hesitate to send us your feedback anytime. To collect additional information, we will be sending all students a COVID quality of life survey the first week back to campus. This survey is to anonymously assess how the school is doing and provide recommendations to the staff for immediate action. Feedback is always welcome and encouraged in addition to these surveys. Contact us through our Student Recommendations Link or email me directly at domonique.hittner@nps.edu.

Our general student body meeting will be on Thursday, 10 February 2022, from 1200-1240, 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. We have many new upcoming events planned to support students. If you are interested in joining our team, please send us a note to pbsa@nps.edu. We cannot wait to connect with you soon!

Domoniqué Hittner
Chair, Presidents Board for Student Affairs
https://nps.edu/group/pbsa
On campus this month

February 2
Climate Gap Discussion
9:30 a.m. | Online

February 21
President’s Day

Looking for the FY23 Board Schedule?

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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.

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