



NAVAL POSTGRADUATE SCHOOL

IN REVIEW

MAGAZINE

JANUARY 2013

The Warrior MBA

THE BUSINESS OF DEFENSE

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INSIDE:

NPS Stands Up New Littoral Ops Center

Newest Members Inducted into Hall of Fame

NPS, Navy Initiate Community Involvement Plan



Rear Adm. Jan E. Tighe
Interim President
Naval Postgraduate School

“The academic reputation of the Naval Postgraduate School stands firmly on a century-old foundation of academic integrity and excellence. I am confident that the exceptional dedication of our students and the commitment of our faculty and staff will not waiver in the face of adversity.”

Welcome to 2013 and what will inevitably be an important year for the NPS campus. I am pleased to take this opportunity to pen my first message for In Review and provide an update on our progress. As a graduate of this wonderful institution and a program/research sponsor, I have maintained a deep personal and professional connection with NPS. Like many of you, I have the utmost respect and admiration for the mission of this institution and the people who fulfill it, and I am honored to serve as Interim President.

This past year presented plenty of challenges to the NPS community. I am confident that together, and with the support of Navy leadership, we are on the right path to turning those challenges into opportunities for improvement and a strengthening of this institution. While many individuals and families are outlining their own set of resolutions for the New Year, NPS hit the ground running, well before the New Year began, on fulfilling our institutional resolutions: commitment to improved compliant processes that strengthen delivery on our mission to provide relevant and unique advanced education and research programs to increase the combat effectiveness of commissioned officers of the Naval Service and to enhance the security of the United States.

This university has been a fixture on the Monterey Peninsula since 1942. Since that time, NPS has woven itself into the fabric of this community. We must never lose sight of our commitment to our neighbors made evident through our generous volunteerism and outreach programs. Events like the annual Memorial Day Concert on the Lawn, the Expanding Your Horizons Conference for young women, providing judges for the Science Fair and other community outreach events enrich us individually and as an institution. Additionally, these events provide the community with a snapshot of what kind of people compose NPS and what we value as an institution. In the coming year, we will continue to place great emphasis on maintaining an open relationship with the community that we are a part of and continue our commitment to service.

To underpin that goal, Secretary of the Navy Ray Mabus asked NPS to develop a community involvement plan. We created community groups and hosted meetings, which opened a dialogue between NPS and Navy leadership with local elected officials, business leaders, educational partners and media professionals. Assistant Secretary of the Navy for Manpower and Reserve Affairs Juan Garcia has taken part in all of the meetings, and we could not be more pleased with the collaboration and frank and open input received in the initial meetings.

Shortly before the Christmas break, we established a Team Inspector General Inspection Recommendation (TIGIR) team to tackle each of the recommendations put forth in the IG Report. Each TIGIR team is made up of a diverse blend of experts from across the campus. I've assigned Marine Corps Col. Mitch McCarthy to coordinate our overall response to the IG recommendations, track our progress, and work with the TIGIR team leaders to ensure we have fully considered the range of options in our response. The teams have each developed their Plans of Action and Milestones and are moving forward smartly.

The Provost Search Committee, headed by NPS Department of Defense Analysis Chair, Dr. John Arquilla, continues to work diligently in search of qualified and experienced candidates to serve as the institution's senior academic officer. Campus interviews and visits are underway for select candidates, and the committee will be actively engaged with the university community for input into this process. The committee is dedicated to moving us forward as quickly as possible, and following these campus visits, will be submitting their recommendations to me for review. I will, in turn, forward a prioritized list of candidates on to the Chief of Naval Operations and Secretary of the Navy.

With a new quarter now underway, I am committed to maintaining the academic standards for which NPS stands, and place a high priority on communication — both on campus and beyond. My promise to you is that NPS leadership will continue to ensure our critical mission is fulfilled and we will over-communicate status and happenings to ensure broad understanding through continued campus communications (small group discussions), President's Portico on the NPS intranet, Inside NPS video spots, and in print material such as the monthly Update NPS, as well as In Review.

The academic reputation of the Naval Postgraduate School stands firmly on a century-old foundation of academic integrity and excellence. I am confident that the exceptional dedication of our students and the commitment of our faculty and staff will not waiver in the face of adversity. Together, we will continue the tradition of academic integrity and excellence, while strengthening all other dimensions of our university.



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On The Cover

Just over 50 years have passed since the Naval Postgraduate School awarded its first degree in management. Since then, the current Graduate School of Business and Public Policy has evolved into a portfolio of defense-focused, degree programs educating more than 600 students in the business needs of the defense enterprise.

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Alumnus Rear Adm. Jan E. Tighe Takes the Helm at NPS

Rear Adm. Jan E. Tighe addressed NPS faculty and staff for the first time during a gathering in King Auditorium, Nov. 28, following the announcement of the university's change in senior leadership by Secretary of the Navy Ray Mabus. Tighe was introduced to the institution's community by Under Secretary of the Navy Robert O. Work.

Tighe is well versed with NPS and its academic prowess, earning both a master's degree in applied mathematics as well as a Ph.D. in electrical engineering in 2001 from the university, but remained connected to the institution well beyond her days as a student.

"For those of you who don't already know me, my connection and commitment to NPS run deep," she said. "Beyond being one of your graduates, I have stayed connected to the school in varying degrees based on the positions that I have held over the intervening 11 years since I graduated. I have served as curriculum sponsor, research sponsor, short course sponsor, and even contributed to faculty evaluation processes for tenure and promotion."

Tighe says her cumulative experience with NPS provides her with a foundational knowledge to effectively serve the institution during this time of transition.

"While I don't know each of you individually, I believe I have a sense of what is important to you collectively in accomplishing our mission," she stressed. "I am humbled by the trust placed in me by the Secretary and CNO in assigning me as your Interim President."

Tighe delivered a straightforward and honest message to the university community, recognizing that the coming months will take a collaborative approach to the hard work that lie before them. But she added that her recent position in the nation's capital has given the requisite experience to roll up her sleeves and do the work that is necessary.

"I am coming to you from a 17-month assignment in the Pentagon, and I can assure you, a one-star admiral in that building is still an action officer," she said. "But neither my rank, nor my position as Interim President, place me above the hard work we have ahead."

As Tighe brought her address to the university to a close, she stressed her intent to engage the NPS community across campus.

"I am well prepared to listen and continue to learn from you as we begin to address this transition," she said. "We will maintain our academic integrity and standards as we develop better business processes. I sincerely hope that you will recognize that Under Secretary Work's



Interim President Rear Adm. Jan E. Tighe, center

personal involvement, and my assignment here, as a sign of how important NPS is to the Navy," she added. "NPS has a great legacy that we will build upon and make the institution stronger."

Mabus appointed Tighe as Interim NPS President, Nov. 27, until a permanent president for the university is appointed. Her most recent assignment was on the staff of the Chief of Naval Operations as the Director, Decision Superiority.

NPS, AFIT Partner on Cost Estimation Certificate Program

A joint educational effort between NPS and the Air Force Institute of Technology (AFIT) celebrated the completion of its first cohort of students in the cost estimating and analysis certificate program this past quarter. Students completed a rigorous set of four cost courses from the institution's Master of Cost Estimating and Analysis (MCEA) curriculum, focused on advanced methods and techniques for cost estimating and analyses.

The program, led by Visiting

Professor Dr. Daniel Nussbaum and Senior Lecturer and retired Marine Corps Lt. Col. Greg Mislack of the NPS Department of Operations Research, along with AFIT Professor Alfred Thal, prepares students for the demanding cost estimating and analysis field within the DOD.

"This is the first time there has been a joint master's degree in cost estimation and analysis, and we are very pleased with that distinction and with the wide reception and demand for the program," said Nussbaum. "The collaboration and partnership with AFIT has been

outstanding and we hope to continue working together in the future."

In March of 2011, AFIT and NPS launched the first cohort of a part-time distance learning program in MCEA. A year later, the program launched its second cohort, and officials say demand for the program continues to grow and develop as applications come in for the next cohort scheduled to start in March of 2013.

Navy's Cyber Commander Addresses IDC Students

Vice Adm. Michael S. Rogers, Commander of the U.S. Fleet Cyber Command/U.S. 10th Fleet (FCC/C10F), spent an afternoon addressing a contingent of NPS Information Dominance Corps (IDC) students during an all-hands call on the university campus, Jan. 8.

"To preserve the Navy's cyber warfighting advantage," said Rogers, "we must continue to develop an elite workforce that is recruited, trained and educated to better understand the maritime environment, employ the latest technol-



Commander of the U.S. Fleet Cyber Command/U.S. 10th Fleet Vice Adm. Michael S. Rogers

ogy advances, and deliver cyber warfighting capability anywhere around the world."

Rogers recognized that there were still substantial challenges to overcome due to the inherent characteristics and rapid technological change of the field. He noted that the cyber community was making significant progress in effecting changes and improvements to the

field, but it was up to every member in the IDC to take steps to continue with these goals.

"I want us to be prepared for the challenges of the future," he said. "But it's up to you to become the solution, to take charge of our future and face those challenges."

"Monterey offers you a unique opportunity to learn and challenge yourselves," Rogers added. "The Center for Excellence is an outstanding resource and knowledge base for you to take benefit from, I urge you to take advantage of your time here and maximize your learning experience."

The Center for Excellence Rogers referred to is NPS' Information Dominance Center for Excellence, led by Executive Director Cmdr. Tim Unrein. Over the years, NPS has been implementing education and research programs to help the Navy achieve the knowledge and skill base required for its IDC goals. Unrein noted how student question and answer sessions with senior IDC leaders like Rogers provide operational relevance and

perspective to their studies.

"With military cyber capabilities growing and changing so rapidly, it is critical for IDC students to understand how cyber fits into the broader picture of national defense," said Unrein. "Vice Adm. Rogers' visit is a valuable chance for IDC officers at NPS to gain perspective into how the education and skills they gain here will be used in the cyber domain, and



Commander of U.S. Naval Forces Southern Command and U.S. 4th Fleet Rear Adm. Sinclair Harris

how that domain is interlinked with operations in other warfighting domains such as air, surface, subsurface and land."

Alumnus, Fleet Commander Returns to Talk Latin America with FAO Students

Rear Adm. Sinclair Harris, Commander of U.S. Naval Forces Southern Command and U.S. 4th Fleet, delivered remarks to NPS Foreign Area Officer students during a visit to campus, Jan. 17. Harris spent the day meeting with NPS leadership, key faculty members and sharing with students his own experiences while studying here.

"There hasn't been a week that has gone by that some part of what I learned while here at the Naval Postgraduate School has not come into play," said Harris during his address to FAOs focused on Latin America. "Whether it being how we planned an operation, or how we had to resource a budget that needed to be defended in the Pentagon, the rigorous and methodical approach required to solving problems in academics continues to be important and useful operationally."

Noting the strength of the NPS institution, Harris went on to mention the value he places on NPS and the student and faculty work that it produces.

"The work you are doing in all the schools here continues to have a direct impact on the fleet," Harris noted. "I just finished reading an NPS student's thesis focused on maritime policing and security

terms of our strategy."

Harris earned a Master of Science degree in Operations Analysis from the Naval Postgraduate School in 1989.

NPS Librarian Honored with Coveted Industry Award

The Carnegie Corporation of New York and the New York Times recently presented the "I Love My Librarian Award" to NPS' Dudley Knox Library Outreach and Collection Development Manager Greta E. Marlatt. Marlatt traveled to New York for the award presentation in late December, where she was joined by both NPS students and alumni in what she coined a moving show of support.



DKL Outreach and Collection Development Manager Greta E. Marlatt

"I appreciate the ability to serve the NPS population and the freedom and flexibility to support their needs," said Marlatt.

The award was the result of a nomination effort led by NPS Department of National Security Affairs Distinguished Professor Dr. Tom Bruneau. There were 10 winners from 1,500 nominations, with Marlatt winning in the College Community or University category.

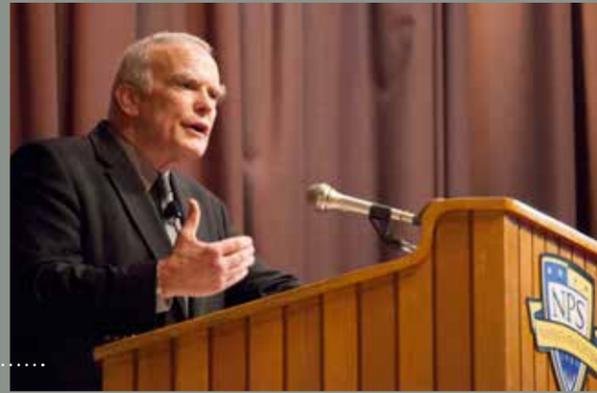
"It was very humbling and a huge surprise... it's an honor," said Marlatt. "One of the things that was the most special to me was that I was nominated from the people that I serve."

In addition to her work as a reference librarian, Marlatt spends much of her time working with the Center for Homeland Defense and Security.

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NPS students, from left to right, Brad Ellis, Thomas Campus, and Joseph Edwards



Zumwalt Legacy One of Many Lessons Learned Through Quarter's SGLs

Acclaimed author, retired U.S. Marine Corps Lt. Col. James G. Zumwalt, addressed students, faculty and staff during his Secretary of the Navy Guest Lecture at NPS, Nov. 14. Zumwalt is the author of several books and head of a security-consulting firm named for his father, Adm. Elmo "Bud" Zumwalt, the youngest officer to serve as Chief of Naval Operations.

The audience listened for nearly an hour as Zumwalt shared his father's legacy, revealing intimate moments from his father's life eliciting both laughter and respectful silence from the packed crowd.

Zumwalt noted that former President Bill Clinton once called his father, "the Navy's conscience." This title was imparted due to the elder Zumwalt's tireless efforts to buck tradition in favor of Sailors who had not always received equal opportunities. "He was a Sailor's admiral," said Zumwalt.

Zumwalt expressed particular pride when discussing his father's efforts to end what he called, "the institutional racism" that was prevalent in the Vietnam era Navy. "My father once said, 'I know my changes resulted in a long list of friends and a long list of enemies, I'm proud of them both,'" said Zumwalt.

The presentation was one of a handful of SGLs over the Fall Quarter, highlighting leadership lessons from those with the first-hand experience to share them. Retired U.S. Navy Capt. David Marquet, former commander of the *USS Santa Fe*, addressed students, faculty and staff in King Auditorium, Jan 15. Marquet gained notoriety across the Navy when he transformed the *Santa Fe* and its crew from a reputation for failure to award-winning success.

"When I took command of the *Santa Fe*, the spark of greatness was hard to find, the crew had been told they were substandard, the previous commander had quit. It was the worst submarine in the fleet," said Marquet.

Marquet espouses a philosophy that champions leadership in every sector of the workforce, and the idea that behavior precedes culture. "The act precedes the thought ... the habit precedes the culture," said Marquet. "If you focus on changing a behavior, the culture will change."

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She also supports library outreach activities and various library collection development efforts.

NPS Promotes STEM Fields Through Expanding Your Horizons Conference

More than 240 girls from grades 5–10 gathered at the NPS campus, Oct. 27, for the Expanding Your Horizons conference, a daylong event meant to promote interest in the science, technology, engineering and math (STEM) fields. The event included a series of hands-on workshops that exposed the students to possible careers or studies in STEM.

"Over the years, we've seen a decrease in interest in the science fields and we want to change that," explained EYH organizer Dr. Dave Nickles. "This is what makes this conference so great ... The kids get hands-on experience in science activities and they leave here believing that they can work in these fields."

This year the conference offered a series of workshops led by professionals in the fields of robotics, geology, mathematics, and other sciences. Countless NPS faculty and students participate, dedicating hours of their own time into holding the event.

As a special treat the students got the opportunity to listen to a local Monterey scientist. Representing the Pacific Grove Museum of Natural History, Ann Wasser gave an energetic speech about her life as a scientist and how she became interested in science.

"I was thrilled to be asked to be a part of this and I think it's really important for these girls to have experiences like this to keep them excited about science," said Wasser. "I was always a science nerd ... and it was fun to be in a room with a group full of girls that enjoy science too."

EYH was started in 1974 by a group of female engineers and educators from the San Francisco Bay Area that noticed a lack of participation from females in the sci-

ences. Originally called the Math Science Network, the EYH Network began planning coordinated efforts to strengthen their individual programs and provide mutual support on a volunteer basis.

Battery Industry Leader Kicks Off Defense Energy Program Lecture Series

Retired Air Force Lt. Col. Kris Johannessen, currently employed with Yardney Technical Products presented the first in a series of near weekly guest lectures through NPS' Defense Energy Program. Johannessen discussed the strategic applications of lithium ion batteries in critical defense programs and space exploration.

"The batteries that go on missiles and rockets, like the Trident D5 and the Minuteman last up to 25 years," said Johannessen. "We want to make sure they work after 25 years."

Johannessen's company has been producing batteries for the military since 1944 — batteries that must be reliable in the most extreme environments. Yardney produced the lithium ion batteries that powered the NASA Mars Space Laboratory (MSL) Spirit in 2004 and mostly recently, the MSL Curiosity Rover.



Retired Air Force Lt. Col. Kris Johannessen

Through the coming quarter, lectures from seasoned energy experts is a central component of the Defense Energy Program's weekly seminar series. The forum brings together students, faculty and energy professionals to investigate real-world energy issues and to analyze Department of Defense energy needs.

NPS, Brazil Hold Joint Workshop on Fiscal Transparency

Faculty at NPS' Defense Resources Management Institute (DRMI) recently conducted a Domestic Finance for Development (DF4D) workshop in Brasilia, Brazil.



Defense Resources Management Institute Executive Director Dr. Francois Melese, Associate Professor Dr. Diana Angelis and United States Partnership for Peace Training and Education Center Program Manager Nathan Christensen, from left

As the designated United States Partnership for Peace Training and Education Center (USPTC), NPS worked closely with the U.S. State Department and the Government of Brazil to bring together NPS professors, diplomats and partner nation representatives for the two-day workshop.

"Our goal was for the U.S. and our Brazilian counterparts to encourage whole-of-government fiscal transparency initiatives in partner countries," said DRMI Executive Director Dr. Francois Melese. "The conference was attended by high-ranking government representatives from Honduras, El Salvador and the Dominican Republic."

Also in attendance was U.S. Assistant Secretary of State for Economic and Business Affairs Jose Fernandez. "We want to help countries position themselves to take ownership of their own development by gathering the necessary resources from domestic sources," said Fernandez.

Melese and DRMI associate

professors Drs. Diana Angelis, Robert McNab, and Anke Richter conducted the workshop with participation from Fernandez and senior Brazilian finance, treasury and central bank officials.

"Each partner brought something unique to the table," said An-

gelis. "The Brazilians, over the last decade, have made great strides in public transparency ... They are absolutely an equal partner ... they have leapt ahead in regard to flexibility and adaptability in the area of fiscal transparency."

The effort caught the attention of U.S. Secretary of State Hillary Rodham Clinton, who praised the workshop in a joint statement with the Brazilian Minister of External Relations following the U.S.-Brazil Global Partnership Dialogue.

Researchers Develop Revolutionary Networking Architecture

Naval Postgraduate School researchers have been developing what has been coined, "the premiere disruptional technology of the decade," by one of the principal investigators.

Dr. Thomas Anderson is a researcher with the Cold Regions Engineering and Research Laboratory, currently working with the U.S. Army's Training and Doctrine Command Analysis Center

(TRAC) at NPS to develop "information models" — or executable descriptions of interactive systems — within a system he calls the Global Information Network Architecture, also known as GINA.

GINA is a "system of systems modeling environment," he says, a digital landscape wherein multiple applications, users and components are able to interact and behave through specified configurations as linked multi-dimensional systems.

"The GINA environment is 'agnostic' ... It takes components, programs and technologies and represents them within itself in a manner that is universal within the GINA environment, allowing for previously unseen levels of interoperability without the man hours and dollars generally spent to make stove-piped technologies work together," said Anderson.

Col. Jeff Magram became familiar with GINA while studying with NPS' Center for Homeland Defense and Security, and put GINA to the test at Fort Hunter-Liggett, Calif., in an exercise dubbed "Soaring Angel" late last year.

In a unit where the ability to view, process and use information can be the difference between life and death, a system like GINA has potentially life-altering implications. GINA allows for the interoperability of unrelated systems and advanced decision matrix databases critical to the kind of operations simulated in the exercise.

"Because of GINA's flexibility we are better able to control our domain ... we are able to tie our various data feeds together and link information," said Magram. "On the operational side, we are able to turn GINA into a massive mission critical database, with the ability to access information must faster than separate stove-piped systems.

"GINA enhances the cognitive toolset for the decision maker, it allows us to focus on what's important, reconfigure quickly along with a developing mission, and be a more agile and capable combat

and civil support organization," Magram added.

Acoustical Society of America Recognizes Oceanography Professor

NPS Department of Oceanography Professor John Colosi has been honored with the prestigious Medwin Prize by the Acoustical Society of America. The award recognizes Colosi's work on ocean internal waves as they relate to sound fluctuations in the sea. He was also honored with being selected to present the Acoustical Oceanography Prize Lecture.

"It's quite an honor to receive the Medwin Prize as I also had the privilege of knowing Hank Medwin when I first arrived at NPS," said Colosi of NPS Emeritus Professor Herman Medwin after whom the prize is named.



Department of Oceanography Professor John Colosi

The Medwin Prize was established in 2000 through a grant made by Herman and Eileen Medwin to recognize a person for the effective use of sound in the discovery and understanding of physical and biological parameters and processes in the sea.

Colosi joined the NPS faculty in 2005 after serving as Assistant and Associate Scientist at Woods Hole Oceanographic Institution from 1996 to 2005.

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National Security Affairs Professor Authors Book on Aid Dependence

There is a Cambodian proverb that states, “People give, but don’t be in a hurry to take.” NPS Department of National Security Affairs Assistant Professor Sophal Ear’s latest work on international aid to Cambodia suggests that, by being “in a hurry to take,” the Cambodian government has done a disservice to its people.

“Foreign aid has a number of unintended consequences in post-conflict environments,” said Ear. “A consensus has emerged amongst those who study aid, that even though aid is meant to encourage development, aid dependence results in bad governance, stunting development.”

Ear argues that international aid allows emerging governments to forego taxation and the accountability that comes with it.

“I am convinced that the long-term effects of aid dependence have made it difficult, if not impossible, for Cambodia to take ownership



National Security Affairs Assistant Professor Sophal Ear

of its own development ... Foreign aid has crippled the government’s political will to tax, and without taxation, the link between accountability and popular elections is broken — corruption is the logical outcome,” said Ear.

“What government will not tax

officially can be collected privately by the ruling authorities to line their own pockets,” added Ear. “It is by weakening accountability that foreign aid most harms governance, by increasing the incentive for corruption and diluting political will.”

Ear argues that good governance in Cambodia is further hindered by a political culture that values loyalty over competence.

“There are two roads ahead for Cambodia, one values loyalty above all else, even more than competence or merit; the other values competence at least as much as loyalty. The right road must be chosen to turn bread and circuses into wealth and prosperity,” said Ear.

Loyalty to the ruling authority, although a seeming virtue, hinders development according to Ear. In the Cambodian context, blind loyalty to the party prevents the sort of introspection and self-criticism that leads to growth.

“You must be able to make a professional judgment ... because of the problem of loyalty, you do not get a professional level of bureaucracy. The rational-legal bureaucracy that is needed to run countries in sane ways that are pro-society and pro-development are just not there. Without them, you have corruption, land grabbing, etc.,” said Ear.

Ear’s interest in Cambodia is not only scholarly, but also born of tragedy and personal experience. He and his family escaped the Khmer Rouge when Ear was a young child. His father died due to malnutrition-induced dysentery while working at a Khmer Rouge commune that was little more than a slave-labor camp.

Ear’s mother managed to save him and his siblings by pretending to be Vietnamese. Her subterfuge was nearly discovered when it was brought to her attention that she had inadvertently given her boys girls’ names and vice-versa. Had she been discovered, she and her children would have likely joined the ranks of the estimated 1.7 mil-

lion killed by the Khmer Rouge.

Ear is also the co-author of the book, “The Hungry Dragon,” in which he explores Chinese efforts to gain international access to natural resources.

NPS Free Electron Laser Team Successfully Accelerates Beam in Spoke Cavity

Over the past several years, NPS has worked in concert with Niowave Inc., the manufacturer, on the development of the university’s



NPS Research Associate Professor Richard Swent

superconducting electron gun. In that time, NPS Research Associate Professor Richard Swent has partnered with Los Alamos National Laboratory and Old Dominion University on an Office of Naval Research (ONR) funded project to design a spoke cavity that would accelerate the particle beam in a more efficient and compact way than accelerators of the past.

For the Navy, such advancements could mean eventually using the capabilities for shipboard laser defense. The collaborative project saw exciting progress in November 2012 with the first successful acceleration of an electron beam in a superconducting spoke cavity, which took place in the Niowave testing facility in Lansing, Mich.

“What they tested was a kind of superconducting accelerator cavity that looks like it has promise for certain applications, particularly

high-vibration applications, like on a ship,” said Swent.

“Because the standard geometry for superconducting cavities is kind of flexible, there are problems with vibrations. If you are operating in a national laboratory or a laboratory like the one at NPS where you have a big, thick concrete floor, you can mount everything rigidly so that the vibrations don’t bother you. But you can’t always do that, so they invented this whole different shape of cavity that’s much more rigid.”

Swent was pleased to see the progress made, having advised on the design and testing of the spoke cavity. “This was the first time that one of these so-called spoke cavities had accelerated a beam. They had done some testing on them before, but they had never actually gotten to the point of using one as an accelerator.”

From here, Swent is continuing to work with the group on the next phase of the project, which will look into beam dynamics simulations, and the design of beam transport systems and diagnostics.

NPS Professor Given Unprecedented Access to Turkmen Archives

NPS Assistant Professor Victoria Clement recently returned from a trip overseas where she was granted nearly unprecedented access to the Turkmen National Ar-

chives. Clement is a historian with a background in Near Eastern languages and civilization. She is currently exploring the intersection of political and social power in modern Central Asia.

“Language and the press are the lenses through which I look at how power is shaped,” said Clement. “One of the things I am looking at in



Assistant Professor Victoria Clement

my work is the change in alphabets, the competition between Russian and Turkmen for dominance, and how have culture and language policies been administered by the State?”

Clement is one of only of two non-Turkmen scholars ever allowed access to the archives. Turkmenistan presents a compelling subject for her studies. As a nation still in transition — its ancient past, Soviet-era occupation, and eventual independence — its evolution offers a rare window into the use of language and culture as political mechanisms to power.

“One of the things that is interesting is the degree to which people abandoned Russian and Soviet culture after independence,” said Clement.

Clement will be returning to Turkmenistan in the spring to attend a scholars’ conference. Her

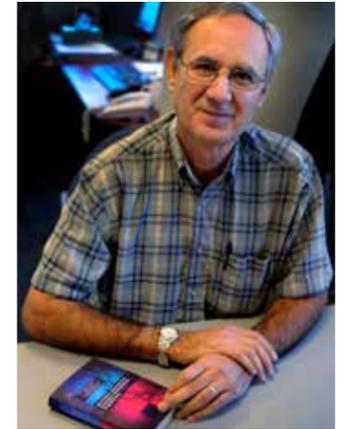
findings are set to be the subject of an upcoming book titled, “Learning to Be Turkmen’ Literacy, Learning and Power, 1904–2006.”

Mathematics Professor Coauthors Book on Nonlinear Equations

NPS Department of Applied Mathematics Professor Beny Neta recently released his co-authored book, “Multiple Methods for Solving Nonlinear Equations” written in collaboration with professors from the University of Niš, Serbia.

“We are hoping to spark a new research direction in our field,” said Neta. “If people know what’s already been done, maybe they’ll come up with new ideas.”

Neta and his co-authors saw the need for a text that would consolidate non-linear equations research. They hope that their work



Mathematics Professor Beny Neta

will help to prevent redundancy in the field and offer a “clear starting point” that will encourage new research. An electronic edition of, “Multiple Methods for Solving Nonlinear Equations” was released in December; a hardcover edition to be released in early 2013.

Former Under Secretary Explores Federal Budget with Business School Class

As part of a guest lecture by former Under Secretary of the Army Nelson Ford, students in NPS’ Graduate School of Business and Public Policy class titled “Defense Budget and Financial Management Policy,” were presented with a simulation for exploring how to actually reduce the federal debt.

“We are studying the broader fiscal context in which the defense budget operates,” explained NPS Professor Douglas Brook. “This simulation gives the students an opportunity to try to stabilize the national debt by making complex spending and tax choices.”

Leading a two-day classroom exercise, Ford shared with students the grim reality of the federal budget, noting that issues like social security and health care must be addressed if reasonable solutions to the budget crisis are to be found.

“The military budget is a large portion of the discretionary budget, which means we are one of the first ones to be looked at when it comes to identifying cost saving measures, cuts and reduction in benefits,” said Marine Corps student Maj. Petra Seipel. “But what many fail to see is that most of the cuts in defense spending will not be enough to offset the shortfalls in the mandatory spending. The decisions that were posed within the simulation exercise made it clear that to balance the budget we need to look at the underlying laws that make our expenditures higher than the revenue we take in.”

Ford presented students with an online budget simulator by the Committee for a Responsible Federal Budget, and tasked students with proposing how to reduce the national debt to 60 percent of the Gross Domestic Product by 2021.

The simulation explores spending categories such as defense, health

care, social security and tax expenditures. Having worked in both the public and private sectors, Ford has a good idea of the management and resource challenges that await the class of future military leaders he was addressing. Prior to serving as under secretary, Ford was the Assistant Secretary of the Army for Financial Management and Comptroller. Today, he serves as President and Chief Executive Officer of consulting firm LMI.

“What I hope that the students take away from the class are three big ideas,” said Ford. “The first is that we are borrowing a trillion dollars a year and, if we don’t stop, we’ll wreck the economy and the country. Second, you can’t solve the problem with cuts in defense and other discretionary spending because it only represents 30 percent of the total spending. And lastly, you have to make major reductions in entitlements and reduce tax expenditures to achieve fiscal stability. And their generation needs to lead the charge to make this happen.”



Former Under Secretary of the Army Nelson Ford, left



The first of the littoral combat class (LCS) ships, *USS Freedom* (LCS 1), rear, and *USS Independence* (LCS 2), maneuver together during an exercise off the coast of Southern California. The Naval Postgraduate School's new Littoral Operations Center, will help synthesize and advance the university's research into the new surface combatant designed to operate in the near shore environment.

NPS Faculty, Researchers Stand Up New Littoral Operations Center

As the new littoral combat ships enter the fleet, the Naval Postgraduate School's Littoral Operations Center advances the university's education and research efforts into naval operations in the shallow water environment.

By Kenneth A. Stewart

FACULTY AT THE Naval Postgraduate School are advancing the university's education and research into the operational and strategic complexities of the near shore environment with the establishment of the Littoral Operations Center (LOC).

Littoral warfare refers to naval campaigns that take place in shallow coastal areas characterized by heavy traffic, varying depth and nearby population centers. The littorals have been a longtime focal point of 21st century naval strategy, culminating with the development of a new class of ship, the littoral combat ship (LCS), designed for these unique environments.

"The LOC will conduct and promote the study of U.S. Navy and allied partner nation policy, strategy and technology necessary to deal with conventional, irregular and criminal threats in these crowded and cluttered coastal waters and their adjacent lands," said LOC Director, NPS Senior Lecturer Dr. Kalev Sepp.

The Navy is making big investments in littoral technology — there are currently 20 plus littoral vessels in the works, but constructing the

vessels is just the beginning. And according to NPS Professor of Practice, retired U.S. Navy Capt. Wayne Hughes, as the vessels continue to be integrated into the fleet, decision-makers must determine the optimal weapons, radar and communications systems, and strategies, necessary to make the vessels most effective.

Hughes has been thinking about littoral operations for over 30 years and was instrumental in the creation of a littoral center at NPS. He was aided in his efforts by, amongst others, retired U.S. Navy Cmdr. Stephen Benson, a littorals expert now working with the contractor providing the primary surveillance radar on one of the currently operating littoral vessels.

"For the last 10 years, I have been passionate about [littoral operations]. I believed that at one point, these ground campaigns would shift and we would need to focus our attention on littoral strategies," said Benson. "It dawned on me that we have 24 ships coming and it was time to stop the grousing and begin the work of figuring out how the ships were going to be employed around the world ... I knew the Navy was working

this problem, and I began looking for ways to help."

Hughes echoes Benson's emphasis on developing littoral operations strategies.

"We are good at blue water operations, but we are not that skilled in fighting and operating in the littoral waters in places like the South China, Baltic and Black Seas as well as the Persian Gulf," said Hughes.

Seeking expertise in littoral operations, researchers turned to allied navies that operate regularly in the littorals.

"There is no better place to explore how anti-access [littoral] strategies are employed than by working with our partners who have been focused on anti-access strategies for years," said Benson. NPS researchers turned to Sweden to learn from their experience operating in the extreme littorals of the Baltic Sea during the cold war, he continued.

"The U.S. and Swedish approaches to littoral warfare present two unique yet coupled perspectives ... The U.S. has been primarily concerned with access via the global commons for brief periods of time, amphibious assault," said retired Swedish Naval Capt. Bo Wallander. "The Swedish Navy, while increasingly active in coalition forces around the world, has been primarily concerned with its national existence while operating adjacent to the overwhelming threat of the Soviet Union for decades."

The Swedish approach is also unique amongst naval forces in that it does not make clear distinction between land and sea operations in the littoral.

"The Swedes have a very different view of the near shore or littoral zone," he said. "The U.S. Navy looks at it as an area that we travel through quickly to get Marines on shore. The Swedes do not draw hard dark lines between the land and the water in the manner that the U.S. Navy tends to ... They see it in an integrated way, how they got to that and managed that integration is something that we want to be able to draw upon," added Sepp.

Despite all the interest in Swedish strategies, littoral warfare strategy is far from new to the U.S. military. The first significant U.S. littoral warfare occurred during the civil war between ironclads, the *USS Monitor* and the *CSS Virginia*. Littoral warfare was also conducted in Vietnam, but interest dwindled after the conflict as the U.S. Navy focused on deep-water operations during the height of the Cold War. Present interest reflects changing geopolitical concerns, economics and the realization that naval forces around the world will be required to do more with less.

"The U.S. Navy has done a great job since World War II continuing high tempo operations, but as we get fewer and fewer ships, it is difficult to maintain the same presence," said NPS Professor of Practice, retired U.S. Navy Capt. Jeff Kline. "A single aircraft carrier demonstrates 'economies of scale,' one carrier today can do three times what a carrier could accomplish in the past, but with modern weapons systems, past solutions begin to look like too many eggs in one basket."

Kline noted the ability of very small vessels operating in littoral areas to have devastating affects upon much larger vessels. The *USS Cole* attack is a case in point. The attack on a single modern destroyer can translate into an overwhelming loss in lives and assets.

"You need to break things up ... The littoral ship allows us to be in a lot of places, with a ship that is significantly cheaper to build with similar capabilities," said Kline. "If we are to move toward smaller ships with greater capability, we are able to affordably increase the fleet."

Students were able to offer insights into optimal equipment, weapons and sensor packages and were able to foresee complications and possible capabilities that have not been previously considered."

Capt. Jeff Kline, USN (Ret.)
NPS Professor of Practice

But, it is not just about manpower and economics. Littoral ships also appear to be an efficient means of responding to modern threats.

"Most of our destroyers are not doing missions related to warfighting, they are doing drug interdiction and other non-wartime activities, littoral ships can conduct those operations more effectively while saving the destroyers for their wartime responsibilities," said Kline.

As NPS researchers explore littoral strategies and determine the correct mix of technology, weaponry and tactics, they are drawing upon the expertise of NPS' unique student body through

wargaming exercises and campaign analysis courses.

"There is overwhelming evidence that we have the ability to do military research with students to the profit of the Navy and its students in many areas," said Hughes

"Students were able to offer insights into optimal equipment, weapons and sensor packages and were able to foresee complications and possible capabilities that have not been previously considered," said Kline.

Students note that the work they are doing with researchers supports individual learning objectives while providing them with an opportunity to shape the future Navy in which they will continue to serve.

"As a student today, I know that one day I may command an LCS," said U.S. Navy Lt. Robert Floyd. "As a student here at NPS, I can have input into the development of the ship that I may serve on in the future." **IR**



A team of Naval Postgraduate School faculty — from left to right retired Army Col. Jeffrey Appleget, retired Navy Capt. Jeff Kline, Dr. Kalev Sepp and retired Navy Capt. Wayne Hughes — have led the establishment of the university's newest academic center, the Littoral Operations Center.

THE BUSINESS OF DEFENSE

BY DALE M. KUSKA

JUST OVER 50 YEARS HAVE PASSED SINCE THE NAVAL POSTGRADUATE SCHOOL AWARDED ITS FIRST DEGREE IN MANAGEMENT. SINCE THEN, THE CURRENT GRADUATE SCHOOL OF BUSINESS AND PUBLIC POLICY HAS DEVELOPED A PORTFOLIO OF DEFENSE-FOCUSED, DEGREE PROGRAMS TO DIRECTLY ADDRESS THE BUSINESS NEEDS OF THE DEFENSE ENTERPRISE.

The Department of Defense, and the U.S. Armed Forces, are about combat effectiveness.

But in modern times of intense budget scrutiny, sitting right behind being effective is being efficient. Budgets have been scrutinized for years, but with sequestration looming, and further tightening of the belts pending, the reality is those budgets will only continue to be examined in excruciating detail.

Efficiency is the best remedy, and in all aspects, it's a pillar of a profitable business. Whether that efficiency lies in logistical optimization, personnel management, finance or in leadership, it is the name of the game for success. But it has become just as critical in DOD operations and strategy as well, and this is the space of the Graduate School of Business and Public Policy, or GSBPP, at the Naval Postgraduate School.

A dedicated management school at NPS was stood up in the late 50s, and according to current GSBPP Dean Dr. William Gates, naval leaders recognized then the value of lessons learned from the business community.

He cites a 1959 conference on the establishment of the Master of Science in

Management degree at NPS, noting the goal for the initial degree was "to inform our graduates about the best management practices from large and complex business and government organizations, and apply them to the 'management of men, material and money' to maximize the Navy's combat effectiveness," Gates said.

It's strikingly similar to the goals of NPS' business school today, however, the means by which the university achieves these goals have evolved dramatically.

"GSBPP's programs, students and faculty have grown, diversified and improved in quality during our 50-year evolution," says Gates. "We now have approximately 70 faculty members, over 50 of whom hold Ph.D.s, and GSBPP now offers a broad spectrum of degrees, both in residence and distance learning, as well as hybrid programs and certificates that meet the individual needs of our spon-

sors, and the students they support."

Gates points to multiple degree programs in management, as well as Master of Business Administration (MBA) and Executive MBA programs also available. Degree programs in contract management, logistics management, program management, defense systems analysis and so many others, round out a broad portfolio of degrees that are tailored to the immediate and near future needs of the Navy and DOD.

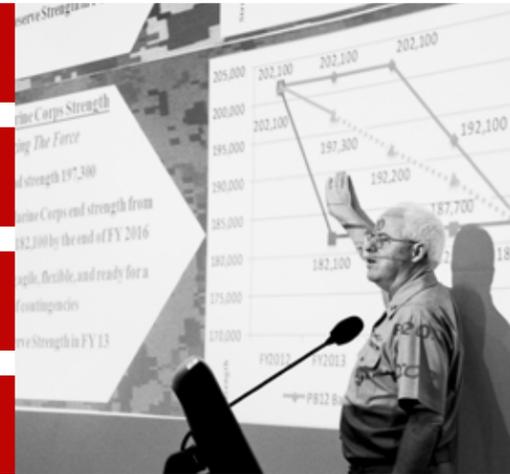
This direct connection to the needs of the services could not be more critical, says retired Rear Adm. Jim Greene, who in partnership with GSBPP Associate Professor Keith Snider, lead the school's Acquisition Research Program.

"I think you'll find that our programs are very well connected with what the Secretary of the Navy's guidance for NPS is," Greene says.

Greene is referring to the Secretary's instruction 1524.2B of 2005, and the subsequent OP-NAV 5450.210D in 2009, which outline in very specific detail how the education and research programs at NPS directly relate to the immediate needs of Navy and Marine Corps leadership.

Those same instructions also encourage senior officers to engage with NPS faculty and administration, detailing their challenges, and tap into the intellectual capital available.

"I am in contact weekly with our sponsors — we have about a dozen of them in total — and garner thesis topics directly from them that our students can access," says Greene. "With these topics, I am tapping into what the senior officers and Department of Defense officials see as the most pressing issues of the day that they want people thinking about."



"WE DON'T DEFINE OURSELVES BY THE DEGREES WE CURRENTLY OFFER, BUT BY THE DIVERSIFIED SET OF MANAGEMENT SKILLS THAT SPAN SEVERAL DISCIPLINES. AS WE TALK WITH POTENTIAL SPONSORS, WE WORK TO UNDERSTAND THEIR PARTICULAR NEEDS AND TAILOR PROGRAMS TO MEET THOSE NEEDS. IF THEY DO NOT ALREADY EXIST."

DR. WILLIAM GATES
DEAN, GRADUATE SCHOOL OF
BUSINESS AND PUBLIC POLICY

Dr. William Gates, Dean of the Graduate School of Business and Public Policy, is shown in a meeting with other officials.

Working closely with longtime NPS GSBPP Professor Joseph G. San Miguel and Operations Research Professor Daniel Nussbaum, the two officers performed a detailed analysis and assessment of the rate, detailing their studies in a joint 2011 thesis. Landay also requested an additional study on workload and cost analyses for the DSCA's Foreign Military Sales efforts, performed by Marine Corps Capt. Henry Creque.

Landay's organization reviewed both works, performed its own detailed studies, and just over a year later, modified the surcharge rate agency-wide. In a letter to GSBPP Dean Gates, Landay noted, "I am personally grateful for the efforts and professionalism exhibited by these individuals and appreciate their tremendous contribution to the Security Cooperation mission," he wrote. "I firmly believe these initiatives will contribute to improved management of this large and complex business."

"Maj. Fix and I are very excited that our research was able to make some really

positive financial changes at an important governmental organization," says Tyabji, currently teaching management at the U.S. Air Force Academy. "The results of this research wouldn't have been possible without the support of our NPS advisors, Professors Nussbaum and San Miguel, as well as the amazing cooperation of DSCA and Vice Adm. Landay."

Gates notes there are countless examples of direct responsiveness between the research performed by GSBPP students, and the needs of fleet and service commanders — it's a true hallmark of the school's diverse set of programs. And the results are immediate, not only in policy but in operational elements as well, such as the re-establishment of a search and rescue unit at Naval Air Station Lemoore thanks to an EMBA capstone project by several NPS students (see article on p. 24).

Beyond research, GSBPP's core educational programs are equally in direct connection to the needs of Navy leadership. Rear Adm. Joseph Mulloy, pictured above left, Deputy Assistant Secretary of the Navy for Budget and

▶ CONTINUED ON PAGE 16



BUSINESS EDUCATION BUILT FOR DEFENSE

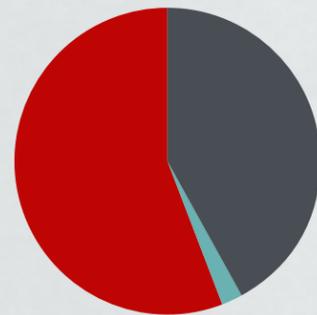
The Graduate School of Business and Public Policy (GSBPP) at NPS offers the only MBA program specifically designed to provide a defense-focused, graduate business education. The objectives of the MBA programs are both to provide professional knowledge and skills to prepare officers for management positions within DOD and to develop broad critical thinking and analytical abilities. A multitude of faculty capabilities combined with diverse academic products and a variety of delivery modes allow GSBPP to be remarkably versatile across the nation and world. The school has the ability to create new curricula on short notice, modify current programs to meet demands of the defense community, and use evolving technology to advance research and scholarship.

290

GSBPP students per year average on board

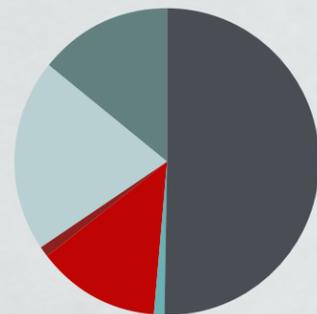
18

average length of program time in months to MBA degree earned



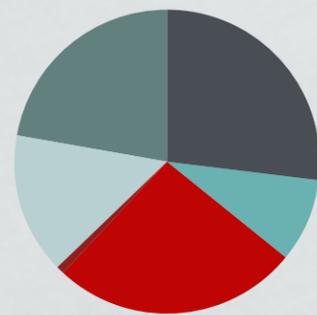
GSBPP PROGRAM TYPE

resident	42%
hybrid	2%
distance learning	56%



RESIDENT ON BOARD BY SERVICE

navy	50%
air force	1%
army	13%
coast guard	1%
marine corps	20%
international	14%



GSBPP STUDENTS BY CURRICULA

acquisition management	27%
defense management	9%
financial management	26%
information management	1%
logistics management	15%
manpower management	22%

ACQUISITION MANAGEMENT

The acquisition management program was designed to develop the knowledge, skills and competencies necessary to effectively lead the acquisition workforce and efficiently manage the resources allocated to the acquisition process. The two curricula tracks, acquisition and contract management, and systems acquisition management, focus on problem solving and decision-making in a variety of acquisition situations demanding critical thinking and a balanced approach in the application of theory and practical solutions. Graduates of the curricula are expected to assume leadership positions in the acquisition workforce.

TYPICAL ACQUISITION MANAGEMENT JOBS:

- program manager
- force development officer
- test and evaluation officer
- acquisition logistics officer
- contracting officer
- director of contracts
- contracts and business policy

ACQUISITION RESEARCH OPPORTUNITIES:

- contracting policy
- contingency contracting
- software acquisition
- open systems

ACQUISITION RESEARCH SYMPOSIUM:

Established in 2003, the symposium features recently completed and ongoing acquisition research conducted by NPS students, faculty and distinguished guest speakers and panelists. The forum is an exchange of ideas among attendees from academia, government and industry who are well placed to shape and promote future research in acquisition.

DEFENSE MANAGEMENT

The defense management program provides future DOD leaders with the analytical skills and critical thinking ability to solve problems and make decisions they will confront in both operational and staff jobs. The interdisciplinary curriculum integrates within the defense context course-work in accounting, economics, mathematics, communications, management theory, and operations/systems analysis. Students design their own concentrations to meet their respective organizations' unique staffing and operational needs.

CENTER FOR DEFENSE MANAGEMENT RESEARCH OBJECTIVES:

- Be a source of education and research
- Inform and guide the design and execution of future reform through support of current and future defense leaders
- Be the center of knowledge about the history, theories, themes, successes, and failures of past defense reforms

DEFENSE MANAGEMENT RESEARCH OPPORTUNITIES:

- strategic communication
- integrating women into warfare communities
- innovation and organizational learning
- leading/managing large-scale change
- networks and networking
- dynamics of organizational transition
- organizational design, negotiation and collaboration

ALUMNI PROFILE:

USMC Capt. Samuel J. Wickline M.S., Naval Postgraduate School, 2008

CURRENT JOB: Senior Programs Analyst at Headquarters Marine Corps, Programs and Resources, Washington D.C. Metro Area

FINANCIAL MANAGEMENT

The financial management program prepares officers for business, financial, and analysis positions within the DON and DOD. Financial managers assist the DON's decision-making processes at all levels by providing accurate, timely and relevant information and analysis. They are concerned with the optimal allocation of human, physical and financial resources to achieve the DON's goals and objectives while assuring efficient and effective expenditure of public funds. Curricula cover topics such as financial reporting standards, cost analysis, budgeting and financial management, management planning and control systems, strategic resource management, and the Planning, Programming, Budgeting Execution System used within the DOD.

TYPICAL FINANCIAL MANAGEMENT JOBS:

- comptroller
- budget analyst
- budget officer
- public works officer
- business financial managers
- action officer
- program analyst
- fiscal officer

CONRAD SCHOLAR PROGRAM:

Designed to identify future leaders of the financial management community, top student theses are selected that address issues of importance to the DOD's financial management community.

ALUMNI PROFILE:

USN Cmdr. John DeDitiis (Ret.) MBA, Naval Postgraduate School, 2006

CURRENT JOB: Senior Financial Manager at U.S. Department of Justice, Washington D.C. Metro Area

INFORMATION MANAGEMENT

The Information Age has generated a revolution in the means in which we conduct business and warfare. New technologies have changed the traditional views of the marketplace, supply chain management, and logistics. As the range and complexity of computer applications have grown, the need to manage and exploit those resources has increased. This curriculum provides both the technical skills and business acumen to deal with a constantly evolving digital world.

INFORMATION MANAGEMENT OUTCOME SKILLS AND COMPETENCIES:

- 1) Manage the acquisition of information systems
- 2) Develop and implement effective strategies and policies to take advantage of technological opportunities and mitigate risk
- 3) Solve information systems engineering and management problems individually and in teams
- 5) Manage Information Systems and infrastructure support afloat and ashore
- 4) Effectively manage and lead in today's constantly changing digital world
- 6) Assimilate new technologies and transform organizations, processes and strategies to compete in the marketplace or on the battlefield.

TYPICAL FINANCIAL MANAGEMENT JOBS:

- project/program manager
- hardware systems command
- NAVSISA project officer
- business manager, PEO
- CIO, acquisition office

LOGISTICS MANAGEMENT

The logistics management program provides education in all aspects of the logistics function. The management core of the program provides study in mathematics, accounting, economics, communications, marketing management, risk analysis, strategy making, and the global defense marketplace. The logistics curricula are significant components of the military supply chain and each provides unique and relevant education that meets the critical needs of the armed services in operations and project management, business modeling for decision making, inventory management, integrated logistics support, procurement and contract administration, systems acquisition, and logistics strategic planning.

TYPICAL LOGISTICS MANAGEMENT JOBS:

- mission support staff action officer
- logistics staff action officer
- maintenance or logistics readiness squadron commander
- operations officer
- flight commander
- J4 staff action officer

LOGISTICS RESEARCH OPPORTUNITIES:

- Managing the service supply chain in DOD
- Logistics Information Technology in Supply Chain Management
- A Diagnostic Approach to Analyzing Weapon System Life-cycle Support
- Optimal Force Sizing and Prepositioning for Natural Disasters

ALUMNI PROFILE:

USN Lt. Cmdr. Joel Tessier MBA, Naval Postgraduate School, 2004

CURRENT JOB: Commanding Officer at 33rd Maintenance Squadron (F-35), Destin/Fort Walton Beach, Florida Area



“The other part of the NPS business school curriculum that I believe is particularly helpful is the focus on organizational culture and strategic management,” he stressed. “The study of the organizational change process is what we learn in strategic management, and I really found it useful... I think the NPS business school has taught me useful tools that can help me be an agent for change within a

large organization such as the Navy.”

GSBPP research and education efforts also keep a keen eye on the emerging and future needs of the U.S. Navy and DOD. Humanitarian assistance and disaster response (HADR) operations are becoming a more critical element of operational strategy, one that will likely only continue to evolve and grow.

The service is learning fast lessons, on the fly, on how to get better at HADR missions, and responding to this need is the GSBPP’s Humanitarian Research Group (HRG), launched by the efforts of Operations and Logistics Management Associate Professor Dr. Aruna Apte.

“THE STUDY OF THE ORGANIZATIONAL CHANGE PROCESS IS WHAT WE LEARN IN STRATEGIC MANAGEMENT, AND I REALLY FOUND IT USEFUL TO LEARN HOW STRATEGIC CHANGES MUST HAPPEN IN LARGE ORGANIZATIONS... I THINK THE NPS BUSINESS SCHOOL HAS TAUGHT ME USEFUL TOOLS THAT CAN HELP ME BE AN AGENT FOR CHANGE WITHIN A LARGE ORGANIZATION SUCH AS THE NAVY.”

**CMDR. GARY LAZZARO
MANPOWER SYSTEMS ANALYSIS, '13**

“I founded HRG as a group of faculty from several disciplines and students interested in the topic,” Apte notes. “We study HADR from a holistic perspective... the cost and budget, the acquisition of assets, contingency contracting, collaboration amongst players and most importantly, the humanitarian operations themselves.”

Apte proudly points to several rigorous studies that have already been completed through the group — projects on topics such as optimizing pre-positioned assets for natural disaster response, and detailed analysis on the request and response processes for DOD sup-

port to domestic disasters.

The HRG is a new effort, but Apte notes that it is only made possible through the intellectual capital, right now on the NPS campus.

“At GSBPP, I have colleagues who work in all the [relevant] areas, so there is a great synergy. It is a great environment to carry out such research due to the diversity of faculty, access to DOD and our students,” who are the officers leading agencies or units dealing with operations and logistics issues, she adds.

“I believe this research area will continue to be vital to both the civilian and military logistics sectors. I know that our accomplishments would not have been realized if we did not have the resourceful and flexible environment of NPS,” she stresses.

Gates is quick to note that this sentiment is at the heart of what truly sets GSBPP apart. Rather than the programs, degrees and certificates that are available, or where the students take them, the NPS business school is about the application of high-level academia to the needs of senior Navy and DOD officers.

“We don’t define ourselves by the degrees we currently offer, but by the diversified set of management skills that span several disciplines,” he says. “As we talk with potential sponsors, we work to understand their particular needs and tailor programs to meet those needs,

if they do not already exist... Our unique niche is that we offer a defense and federal government focus and have the flexibility to provide the specific mix of skills, outcomes and delivery modes that best meet the requirements of interested sponsors.

“Our mission remains largely the same today as it did when that first degree was awarded a half-century ago,” he continues. “As our capacity allows, the GSBPP expects to continue meeting the requirements of our customers in the public sector. And I suspect that primary mission will remain the same for the next 50 years.” **IR**

Navy, University Leadership Initiate NPS Community Involvement Plan

By Kenneth A. Stewart

ASSISTANT SECRETARY OF the Navy for Manpower and Reserve Affairs (ASN M&RA) Juan M. Garcia joined Naval Postgraduate School Interim President Rear Adm. Jan E. Tighe in welcoming local community leadership onto campus during several outreach meetings in December and January.

The gatherings represent the first round of several scheduled meetings in the development of a community involvement plan at the request of Secretary of the Navy Ray Mabus designed to strengthen ties between the prestigious graduate school and the regional community.

“The Secretary of the Navy has a deep appreciation for the long relationship between the Naval Postgraduate School and the Monterey Peninsula,” said Garcia. “These groups will allow for direct and persistent lines of communication between the Navy, NPS and local community leaders.”

Tighe expressed appreciation that Assistant Secretary Garcia was able to participate in these initial discussions, and agreed with the importance of them in moving forward.

“I am grateful that Assistant Secretary Garcia has been willing to reach out to our local community leaders to learn about their perspectives on NPS and our role in the greater Monterey community,” said Tighe. “These discussions will help to shape the way ahead and ensure Naval Postgraduate School’s future success. His presence here is a testament to the importance of the institution to the Navy.”

Garcia thanked community leaders for their support and recognized their concerns. NPS has been a staple on the Monterey Peninsula for generations, and its community and economic impact is important to the region’s well being.

The involvement plan called for the establishment of several groups, incorporating leaders from the local city governments, regional higher educational institutions, senior business representatives, and media officials.

“Having multiple focus groups, incorporating leaders from local government, business and educational organizations, will ensure the institution has a clear understanding of the region’s priorities and concerns as we move forward,” said Garcia. “I believe all of those involved have the utmost respect for NPS, and we greatly value the input the community is providing.”

Garcia’s visit to campus also afforded him the opportunity to engage with the institution’s students and faculty during several briefs and meetings. During a Q&A with current NPS students, Garcia posed a series of questions on a wide range of subjects, with the students offering their own opinions on everything from NPS research opportunities and faculty to future assignments and quality of life issues.

“During this visit to campus, I took the opportunity to meet with several students and faculty to gain a deeper understanding of their perspec-

tives of the institution,” said Garcia. “The men and women studying here are the future leaders of the Navy... As we move forward, we must keep a vigilant eye toward the true value of NPS.”

In addition to his meetings with regional leaders, students and faculty, Garcia also spent an afternoon touring various NPS educational and research facilities.

“I was impressed with the research facilities and labs I had the chance to explore this afternoon,” said Garcia. “Certainly, any graduate education requires a fundamental effort in research, and NPS clearly has the talent and facilities to support the explorations of its students.” **IR**

“These discussions will help to shape the way ahead and ensure Naval Postgraduate School’s future success.”

Rear Adm. Jan E. Tighe
NPS Interim President



Assistant Secretary of the Navy for Manpower and Reserve Affairs (ASN M&RA) Juan M. Garcia and NPS Interim President Rear Adm. Jan E. Tighe prepare for the first of several meetings in the initiation of the institution’s community involvement plan. The gatherings represent the first of several scheduled meetings in hopes of strengthening ties between the university and the regional community.



Retired Rear Adm. and NPS graduate Dr. David Titley, pictured during a campus visit while serving as Oceanographer of the Navy, now applies his educational and Navy career experiences leading the National Oceanic and Atmospheric Administration as Deputy Under Secretary for Operations.

NPS Alumnus Applies Education, Navy Career in Leading NOAA Operations

By Amanda D. Stein

WHEN NPS ALUMNUS and current Deputy Under Secretary for Operations at the National Oceanic and Atmospheric Administration (NOAA), Dr. David Titley, likens the structure of his organization to that of a “small scale version” of the U.S. Navy, he is referring to one of the lesser-known dimensions of the Department of Commerce branch.

NOAA oversees a fleet of 19 ships, almost a dozen aircraft, and is one of the United States’ seven uniformed services — the NOAA Commissioned Officer Corps. Several NOAA officers walk the halls of his alma mater, the Naval Postgraduate School, each year, pursuing the academic opportunities that Titley himself champions today.

But NOAA also oversees the National Weather Service (NWS), an operation that is critical to American security as evident with the recent landfall of superstorm Sandy across the eastern seaboard, and the subsequent devastation that occurred throughout the nation’s most densely populated region late last year.

In times of critical decision-making, Titley, a retired Rear Admiral, says his background in advanced education and Navy leadership experi-

ence provide the foundation for making the difficult decisions that leaders must make.

“There are not a whole lot of active duty military officers, and even fewer flag officers, who have Ph.D.s, so I’m often asked why the Navy invested in my degree,” explained Titley. “The way I look at it, training teaches you for the present, but education teaches you how to think about the future. And it’s not only thinking about the future, but thinking about problems that, when you were in post-graduate school, you didn’t even know were going to be of interest to the Navy.”

Dr. David Titley
Deputy Under Secretary of Operations
National Oceanic and Atmospheric Administration

of NOAA in June of this past year, earned his master’s degree in meteorology and physical oceanography, and a doctorate degree in meteorology from NPS. His dissertation research was focused on the rapid intensification of tropical cyclones, which have proven dangerous for civilian populations as well as the Navy’s maritime operations — and were no more evident than with Sandy’s power surge.

Since assuming his current position, Titley has relied upon his Navy leadership experience and his academic background to help assess the future operational needs for the organization charged with oceanographic and meteorological research and planning. The NOAA Corps, with over 300 commissioned officers, is just one dimension of the administration that also serves as home to the NWS, a large research office, and a number of branches dedicated to furthering atmospheric and maritime planning and operations — from issuing storm warnings to overseeing fisheries. One of the focal points of Titley’s leadership, he says, is in examining the current state of his organization.

“Right now, as the Deputy Under Secretary for Operations, I’m really just working out some real basic things. In fact, to borrow from Adm. John Harvey, I’ll say ‘Brilliant at the Basics,’ because I think it can apply to NOAA,” said Titley. “It’s important to look at how we manage our IT, how we do our hiring of civilian personnel, how we do our acquisition, how we do our financial management, and how we just do the business of NOAA. All of those things, I’m just taking a hard look at and seeing where there are opportunities for improvement.”

With such a wide-reaching research mission, Titley sees the NOAA operations as necessary to keep the U.S. a step ahead of the challenges of the future — one of growing concern is climate change. He noted the Arctic has seen a dramatic decrease in multi-year ice, which had previously prevented ships from passing through the region. Today, leaders are beginning to ask the logistical questions about an area that may soon see more traffic from tourism, commerce and resource exploitation.

“What we see in climate change, I think of it really as no more or no less than the physical battle space in which our Navy has to operate everyday,” explained Titley. “And when directed by the national security, they be required to fight and win in that battle space. So just as we plan for changes in policy, changes in economics, and changes in demographics, the U.S. security establishment, and the Navy in particular, should also plan for when our physical environment is going to change. And that really, to me, is the link between the national security and the physical science of climate.”

Titley has decades of experience in weather systems and oceanography, having previously served at Fleet Numerical Meteorological and Oceanographic Center, Naval Oceanography Operations Command, and Naval Meteorology and Oceanography Command.

Having served both Navy and civilian meteorological and oceanographic institutions, Titley understands the value of the two coming together in collaboration. In looking to the future, he expressed hope that NOAA will continue to find new opportunities to share expertise and ideas with partners in the scientific community.

“I think that collaboration is important, and it certainly continues to improve. And it really extends from strategic all the way down to tactical. At the strategic level, we work very closely with the Navy on the Ocean and Atmosphere Prediction System, because at the end of the day, we share a battle space.”

Titley hopes to see partnerships between NPS and NOAA extended as well, and beyond the university’s meteorology and oceanography departments, drawing on the expertise and research within fields like operations research.

“I think there is an opportunity for collaboration with NPS and the great mixture it has beyond the meteorology and oceanography departments,” Titley explained. “Some of what we do requires people with skillsets different than oceanographers or meteorologists. It requires skillsets such as operations research or operations analysis, among others. So I see this as not only collaboration with the institutional departments we have worked with previously, but reaching across departmental lines to reach those that may not have participated yet.” ■

NPS Grad Applies Homeland Security Studies to Monumental ‘Endeavour’

Naval Postgraduate School alumnus, City of Inglewood Police Lt. James Madia, played a lead role in ensuring the Space Shuttle *Endeavour* safely rolled to its final destination at the California Science Center following its farewell tour last October.

Madia, a 2011 master’s degree graduate of the Center for Homeland Defense and Security (CHDS), was the planning coordinator and event commander as the shuttle traversed Inglewood on a six and one-half mile trip that included two ceremonial stops within the Southern California city.

The university’s CHDS degree program focuses on giving local, state and federal officials the strategic and operational tools for improving homeland security preparedness and interagency cooperation for challenges large and small.

On top of the typical crowd and traffic control planning that comes with a large-scale event, Madia had to manage inter-agency collaboration and homeland security issues associated with a high-profile display of a symbolic national icon.

“Clearly, when you are working a large-scale event the main issues are going to be crowds and streets,” Madia said. “We were also moving a national treasure, a symbol of America. It was at least a little likely that a terrorist would like to use the symbolism of the day to hurt people.”

That meant working with more than 30 public and private agencies ranging from the California Highway Patrol to the region’s electricity provider, Southern California Edison. All of Inglewood’s city departments, such as Public Works and Parks and Recreation, were mobilized for the job.

“I can’t tell you how much I thought about CHDS through the whole process,” he said. “All the discussion about strategic planning, all the awareness about homeland security issues came to mind, particularly the work we did with agency collaboration.”



NPS Partners with USUHS on Grad Certificate Program in Health Care Simulation

By MC1 Grant P. Ammon

THE NAVAL POSTGRADUATE SCHOOL'S Modeling, Virtual Environments and Simulation Institute (MOVES), in partnership with the Uniformed Services University of the Health Sciences (USUHS), has developed a graduate-level certificate program that provides health care simulation center directors, staff, users and supporters with state of the art education focused on the theory and practice of health care simulation.

The Healthcare Simulation certificate program is delivered asynchronously to students across the country already serving as managers of programs using modeling and simulation to train health care professionals. Graduates of the one-year program will be versed in the current best practices of health care training and education.

"The students participating in our first cohort are already managing the use of simulation training," noted U.S. Navy Cmdr. Joseph Sullivan, director of NPS' MOVES Institute. "They are well established leaders in the health care profession, but their knowledge of simulation has been primarily self taught. This certificate offers the opportunity for formalized training, and illustrates the underlying principles of applying and developing simulation solutions."

Noting the forecasted shortage of health care professionals in the United States over the coming decade, Sullivan sees modeling and simulation as an effective way to bridge a critical gap in the health care in-

dustry, and the development of a modeling and simulation management certificate as a meaningful endeavor.

"Studies are showing there will be a shortfall of health care professionals in the United States," noted Sullivan. "Between now and 2020, there will be an estimated 5.6 million new jobs for health care workers nationwide. Partnering with USUHS to deliver this certificate program is kind of a perfect storm in timing."

Senior health care leaders within the Department of Defense (DOD) are increasingly looking towards modeling and simulation to fill these shortfalls.

"We are having the exact same problems as the civilian sector when it comes to the need for qualified medical providers," noted Sullivan. "One of the advantages we have is that Assistant of Secretary of Defense for Healthcare Affairs, Dr. Jonathan Woodson, recognizes this problem and wants to use simulation as a means to radically reform the education model to meet this demand."

Currently there are 16 DOD simulation centers and three Department of Veterans Affairs learning centers utilizing modeling and simulation to train health care workers. When senior members from USUHS began looking for solutions to address the shortfalls in qualified modeling and simulation managers, MOVES and NPS were uniquely positioned to offer education opportunities to help meet the shortage.

"The certificate program is a nice collaboration between the Uniformed Services University and NPS," noted Dr. Joe Lopreiato, a Professor of Pediatrics and Associate Dean for Simulation Education at USUHS. "We are a graduate and undergraduate medical and nursing school... What we bring to the program is the health care content and expertise, and NPS brings the expertise in how to deliver modeling and simulation."

With the inaugural cohort of students now through their first course in the series, Lopreiato is optimistic about the effectiveness of the instruction, and the future application and success of the program within the DOD.

"This is the first year the course is running, we are already offering another certificate program next year," noted Lopreiato. "We are in the process of looking for long-term funding for this course to happen every year. We believe there is a large enough audience within the DOD to continue to grow this effort." **IR**



Cmdr. Ramona Domen of the Naval Medical Center San Diego Medical and Surgical Simulation Center checks the heart and lungs of the Mobile Adult Trainer mannequin. A new graduate certificate program, developed in partnership between NPS and the Uniformed Services University of the Health Sciences, provides similar health care simulation centers with state of the art education focused on the theory and practice of health care simulation.



The two newest members of the prestigious Naval Postgraduate School Hall of Fame — former Chief Executive Officer of Science Applications International Corp., retired Marine Corps Col. Walt Havenstein, left, and former Commander of the U.S. Special Operations Command, retired Navy Adm. Eric Olson, right — stand before the wall dedicated to Hall of Fame members in Herrmann Hall.

NPS Inducts Iconic SEAL, Industry Mogul Into University Hall of Fame

By Kenneth A. Stewart

THE NAVAL POSTGRADUATE SCHOOL welcomed its two newest inductees into the university's prestigious Hall of Fame during a formal ceremony in Herrmann Hall, Nov. 30. Interim President Rear Adm. Jan E. Tighe presided over the event, enshrining retired Adm. Eric Olson and retired Marine Corps Col. Walt Havenstein as the latest graduates to receive the distinguished honor.

Olson served 38 years in the Navy, achieving the unique distinction of being the first Navy SEAL to earn the ranks of three- and four-star admiral. In welcoming Olson to the prestigious hall, Tighe offered testament to the sacrifices made by the national security affairs alumnus.

"It would be appropriate to say he led by example," Tighe said of Olson, "demonstrating a tireless commitment to excellence and service to his country through his military career, from which he later retired as the longest serving SEAL the Navy had ever seen."

While Olson humbly took to the podium to accept the honor, he admitted his attendance at NPS occurred as a matter of luck and circumstance.

"I consider myself an accidental inductee," Olson noted. "I was an Arab linguist and Middle East Cultural Specialist studying at DLI [Defense Language Institute], and I started sitting in on classes at NPS. Eventually they decided to give me credit for them," he added.

"I am a fan of what this institution has always been," Olson continued. "The freedom of an academic environment and an academic staff that encourages freedom of thought. My experience at NPS was one of the most extraordinary experiences in my military career."

Olson stressed the importance of higher military education in an era of modern asymmetric warfare. He noted that success on the battlefield is not

simply a matter of who has the best equipment or the most lethal weapons.

"We have to be able to think our way out of conflicts," he stressed. "NPS, as an institution, is crucial in its ability to produce professionals capable of accomplishing that task."

The second inductee into the university's Hall of Fame left his mark on national defense not only during his time as both an active Marine Corps officer and reservist, but also during his career beyond as well. Walt Havenstein would follow his years of dedicated military service with a legendary career in industry, culminating in more than three years as Chief Executive Officer of Science Applications International Corp.

As accomplished as his career in industry was, however, it's been his role as Chairman of the Board of FIRST (For Inspiration and Recognition of Science and Technology) that he is most proud of, exerting a tireless commitment to "create a world where science and technology are celebrated," he said.

"Mr. Havenstein has distinguished himself beyond a stellar career in industry, serving as an unwavering champion of education for youth in science, technology, engineering and mathematics programs," Tighe said. "As Chairman of the Board of Directors for the non-profit organization FIRST, Mr. Havenstein helped inspire future generations of leaders and innovators through hands-on education."

Olson and Havenstein are the 18th and 19th alumni respectively to be inducted into the university Hall of Fame. Other notable members include former Chairman of the Joint Chiefs of Staff retired Adm. Michael Mullen; Permanent Secretary, Thailand Ministry of Defense General Apichart Penkitti; and former Commandant of Marine Corps retired Gen. Michael Hagee. **IR**



The Veterans Village Stand Down is an annual three-day 'camp' where homeless veterans are given food, medical attention, clothing, and assistance with finding jobs and housing.

Marine Corps Student Uses Ops Research Thesis to Combat Veteran Homelessness

By Amanda D. Stein

ABRAHAM LINCOLN LONG ago charged the nation with the duty to “care for him who shall have borne the battle, and for his widow and his orphan.” NPS Operations Research (OR) student Marine Corps Maj. David Coté has tried to do just that in his seven years of work as a volunteer with the Veteran’s Village of San Diego (VVSD), a non-profit organization dedicated to helping homeless veterans access the resources and assistance they need to get back on their feet.

Upon learning about data analysis and modeling in his OR curriculum at NPS, Coté found a way to apply his studies to the cause that had long been close to his heart. Coté, a December graduate, used his master’s thesis research to produce a tangible model for helping treatment providers identify homeless veterans most

at risk for early exit from a treatment program.

“Veterans are statistically over-represented in the homeless population. Roughly 23 percent of the homeless population are veterans whereas only nine percent of American adults are veterans,” said Coté. “Furthermore, 67 percent of homeless veterans served three or more years and 90 percent of them received an honorable discharge, but still almost one in four homeless persons is a veteran. This is unacceptable.”

Maj. David Coté, USMC
Operations Research ('12)

“I believe education will help to reduce the veteran homeless numbers. Education brings dignity, security, confidence and increased opportunity. My mission as a Marine, academic and advocate is to widen the circle of opportunity for all veterans including those that are homeless.”

homeless veterans struggling with chemical dependency, Coté centered his thesis work on developing a mathematical model for predicting treatment retention and program completion for veterans participating in an addiction treatment program.

Upon checking into the VVSD for assistance, veterans are asked, among other things, if they have any chemical dependency for which they need treatment. They are also asked a series of questions outlined by the Department of Housing and Urban Development, noting demographic information such as age, combat era and mental health history.

Coté analyzed three years worth of data to develop a scoring card that he calls the Service Member Attrition Risk Tool (SMART) Card, which allows treatment providers at VVSD to score incoming veterans based on demographic factors, such as age and the number of years the individual has been homeless, to identify and interpret the risk factors of premature discharge. He hopes that such detection of high-risk veterans will allow the appropriate resources to be made available to help them succeed in treatment.

“This research study is terrific and already helping in significant ways. We can now make targeted interventions, improve treatment outcomes and reduce treatment episodes for our veterans,” said VVSD President and Chief Executive Officer Phil Landis. “With this analysis we see an improved pathway for homeless veterans; a path that leads to self-sustainable independence and a meaningful life . . . I wish we had this study five years ago.”

The SMART card will allow for staff to recognize during in-processing paperwork whether certain individuals may be at high risk of not completing their treatment programs. Often, those with chemical dependencies make several attempts at treatment before succeeding. For some, it’s a matter of getting a more tailored treatment plan within their first 150 days.

“The treatment providers at VVSD don’t have the statistical software that I used here at NPS. They don’t have the regression analysis tools,” Coté explained. “These folks are running a non-profit organization, and doing the best they can with what they have. So what do I want to do? I’ve got to boil it down and make it a basic tool that’s easy to use.

“So I put it on a card, with simple questions. I hand out the SMART card to case providers, and they can use it with next to no training. It doesn’t require statistical software, and it reflects the probability of failure that I calculated analytically,” he added. “And here is another important finding. My scoring scheme maps to the analytical probabilities with a 99 percent correlation. It’s not perfect, but it’s pretty close.”

After seven years as a volunteer at the VVSD’s annual Stand Down event, a three-day ‘camp’ of sorts where homeless veterans are given food, medical attention, clothing, and assistance with finding jobs and housing, Coté has become personal friends with some of the veterans so desperately in need of assistance. He saw the same pride and determination in them that military service had instilled decades earlier, but many were simply in need of a little help. For Coté, the quote from Abraham Lincoln could not have been more resounding.

“Within our military, our people are our most precious asset. More important than ships, planes and rifles — we must know our veterans, know their needs and try to determine the best way to meet those needs,” said Coté. “While homeless veterans need access to secure housing, and viable employment, each veteran has his or her own unique set of circumstances that we must consider.

“Homeless veterans often times need more than money, free clothes, free food and even housing. They may need assistance not only with counseling, job training, education, and chemical dependency. We often times need to customize our assistance to the individual needs of each homeless veteran.”

Coté saw his role in helping homeless veterans not only as a personal responsibility, but as a professional one as well. He saw his tour at NPS as an opportunity to use the resources available to him to help support the work being done through VVSD. Coté’s 12 years in the Marine Corps helps fuel his sense of duty to his fellow service members, a responsibility that he sees as lasting well beyond the time one leaves the service.

“On any given night there are approximately 75,000 homeless veterans on the streets,” said Coté. “I believe that effective leadership requires courage, consistency, competence, and compassion and helping homeless veterans and getting to the left of this problem is the right thing to do.”

Having been given the opportunity to study at NPS, Coté has become a strong proponent of education for military service members. He believes education has the potential to help veterans prepare for life after their service. Although the veterans that Coté encounters through his volunteer service have already been dealt a rough hand, he sees education as the way to “get to the left of the problem” and prevent future generations of veterans from ending up in similar circumstances.

“Like the tremendous educational opportunity afforded to me at NPS, I believe we should try to prepare all veterans not just for war, but also for life,” Coté explained. “They each answered the call to serve. I want to make education a mission and ensure that every veteran is prepared for life in and out of uniform.

“I believe education will help to reduce the veteran homeless numbers. Education brings dignity, security, confidence and increased opportunity. My mission as a Marine, academic and advocate is to widen the circle of opportunity for all veterans including those that are homeless.” **IR**



NPS Operations Research graduate Maj. David Coté, left, joins his friend and former homeless Vietnam Army veteran Ben Rodriguez. Through his work with the Veterans Village of San Diego, Coté has spent the last seven years volunteering to help vets like Rodriguez access the resources they need to get back on their feet.

EMBA Capstone Returns Search and Rescue Unit to NAS Lemoore

By Amanda D. Stein

THE WHIR OF the Sikorsky MH-60S Seahawk at Naval Air Station (NAS) Lemoore is a welcomed one, as a new search and rescue (SAR) unit has geared up to begin operations and support open water training for the base's 16 strike fighter squadrons. For Naval Postgraduate School alumnus and NAS Lemoore N5 Strategy and Future Requirements, Russell Biros, that sound has been a long time coming.

What began as an issue of concern for Biros during his time as a reservist led to his NPS Executive Master of Business Administration (EMBA) capstone project, and ultimately, a permanent civilian position dedicated to seeing the SAR unit's establishment completed.

"I am very grateful I was able to help with the return of SAR to NAS Lemoore. Base leadership was extremely generous when they offered me the opportunity to attend the Naval Postgraduate School's EMBA program. As such, it was important to me that our work resulted in the return of the SAR capability that base leadership desired."

"The important thing about the EMBA program is the students don't have to wait to take their education out into fleet," noted EMBA Program Manager and Lecturer, retired Navy Cmdr. William Hatch. "They leave the classroom on any given day and take what they just learned into the office. They don't have to wait until they graduate. For the 24 months that they are in the program, they inject every course immediately into the fleet," he added.

Biros was first made aware of the need for a SAR unit when he served at the F/A-18 Hornet Wing, Commander, Strike Fighter Wing Pacific, where leadership had expressed concern for the slow response times of neighboring rescue resources in the event of a training accident.

The previous SAR unit had been operational at NAS Lemoore for 41 years before being deactivated in 2004. The need for search and rescue capabilities in the area was outweighed by the unit's high operating costs, an issue tackled by Biros and his peers in their capstone project.

Biros and his classmates in the Lemoore cohort, Lt. Cmdr. Stephen "Cade" Hines, Lt. Cmdr. Tinsika Riggs, and Lt. Cmdr. Noel Corpus, submitted their final project, titled "Cost Analysis for a Dedicated Search and Rescue Capability for Commander Strike Fighter Wing U.S. Pacific Fleet."

Upon the completion of their capstone, the group's findings were presented to decision makers within Commander, Naval Air Forces, and Biros was hired on as a civilian at Lemoore to continue to push the project. The resulting unit of 30 active duty sailors, 40 civilian contractors and three helicopters, as well as the capability to conduct remote operations out of the Marina Municipal Airport, placing SAR duty crews closer to the open ocean training areas, has begun operations.

Graduate School of Business and Public Policy Dean, Dr. Bill Gates, reiterated the value of applied research, noting that it is at the core of all student capstone projects through the EMBA program.



This MH-60S Seahawk helicopter is assigned to the now operational NAS Lemoore's Search and Rescue unit established as a result of the capstone project of four Executive Master of Business Administration students.

"Biros' project illustrates the exceptional value provided by our EMBA program. Our students receive a fully-accredited, government-sponsored EMBA. In return, our students complete capstone projects addressing current problems facing the organizations in which they work. Feedback from the 'clients' accepting the students' capstone projects indicate that the stu-

dents' work has more than offset the Navy's cost to sponsor the program." "We were very grateful that the project went such a long way to actually re-establishing the unit," added Biros. "And NPS was very instrumental to the setup ... we actually took what we learned and were able to apply it to create something tangible." ■■

Cyber Student Honored With Prestigious Vice Adm. Richard Mayo Award

By Amanda D. Stein

NPS CYBER SYSTEMS and Operations student Lt. Jason Hughes has been presented with the Vice Adm. Richard W. Mayo Award, nominated for the honor by his previous command, Naval Computer and Telecommunications Area Master Station Atlantic (NCTAMS LANT) Commanding Officer, Capt. Danelle Barrett.

Hughes is "a true leader and visionary in the Information Dominance Corps who is already thinking and operating at a more senior level. His contributions to the areas of operational communications for joint and afloat naval forces are exceptional and have longstanding, positive impacts on national security," read Information Dominance Center for Excellence Director Cmdr. Tim Unrein from the award citation on behalf of Navy Cyber Forces Commander Rear Adm. Gretchen S. Herbert.

The Mayo Award, named for the first commander of the Naval Network Warfare Command, is presented annually to an Information Professional (IP) officer who demonstrates vision, innovation and exceptional performance in information technology (IT) and operational command, control, communications and computers (C4).

"Lt. Hughes was selected for the award over his peers in the Information Professional community worldwide," said NPS Senior Intelligence

Officer Capt. Jennith Hoyt after formally presenting Hughes with his certificate. "This shows what an exceptional officer Lt. Hughes is, and I know he will continue to be an instrumental leader in the Information Dominance community and the Navy."

Hughes joined the Navy over 18 years ago, and started as a Fire Control Technician, but says he spent most of his Navy career in positions some way related to information technology and C4, including teaching IT "C" Schools. During his tour with NCTAMS LANT, Barrett credits Hughes for setting the standard for excellence in Defensive Global Information Grid Operations.

"Because of his maturity, innovative thinking, and expert knowledge, he was selected as the Joint Fleet Telecommunications Operations Center Director, a position normally held by a more senior officer," explained Barrett. "He led five watch teams providing the operational platform for information to thousands of Navy, joint and coalition forces worldwide.

"His direct oversight during deployment planning and execution ensured flawless communications support to the multiple Strike Group deployments," she continued.

For Hughes, continuing education has been a personal commitment,

having dedicated free time during his 2010 commissioned tour to earning an academic certificate in Information Systems Technology through NPS' distance learning program. When the chance presented itself for Hughes to attend NPS full-time for his master's degree, he jumped at the opportunity. Although only one month into his studies at NPS, Hughes says he looks forward to bringing his unique experiences in IT and C4 to the cyber conversation.

"You look across, not just military, but federal government as well, and no one really has the clear direction for how we proceed in cyber," said Hughes. "That means it's important for leadership to bring people together with diverse opinions and backgrounds to work to develop these solutions.

"I think you're going to find a lot of people who bring different things to the table. And some people who turn out to be true leaders and visionaries in cyber, may not even have a background in cyber. And that's what's interesting about the information professional community," he added. "You've got people of quite diverse backgrounds all coming into this community, and they all bring interesting strengths and different ways of looking at things." ■■



NPS Cyber Systems and Operations student Lt. Jason Hughes, left, is presented with the Vice Adm. Richard W. Mayo Award by Capt. Jennith Hoyt, NPS senior intelligence officer. The honor is presented annually to an Information Professional officer who demonstrates vision, innovation and exceptional performance in information technology and operational command, control, communications and computers.



The Fall quarter's collection of graduates line up in Spruance Plaza in preparation for commencement ceremonies, Dec. 14, when nearly 300 new NPS alumni received their diplomas from Interim President Rear Adm. Jan E. Tighe and speaker, retired Lt. Gen. Robert L. Ord III, a former Dean and center director at the institution.

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Retired Army General, Former NPS Dean Challenges Fall Graduates

By Kenneth A. Stewart

THE NAVAL POSTGRADUATE SCHOOL honored nearly 300 graduates during Fall Graduation ceremony in King Auditorium, Dec. 14. Presiding over the ceremony was NPS alumna and Interim President Rear Adm. Jan E. Tighe.

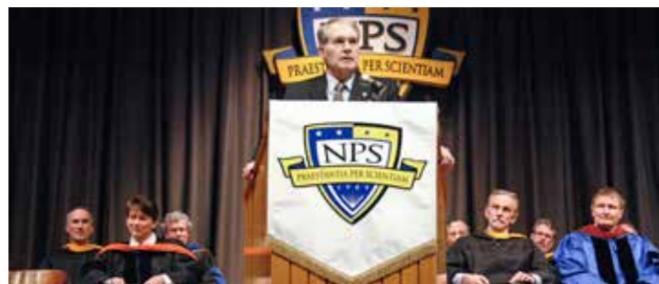
"The Naval Postgraduate School is graduating another class of well-educated officers who are capable of critical thinking, problem solving, and succeeding at a much higher level than they were before entering our doors," said Tighe. "Because of the vital work you have accomplished on behalf of this institution, our nation, and nations around the world, are safer today."

Tighe's remarks were followed by those of guest speaker, retired U.S. Army Lt. Gen. Robert L. Ord III. Ord has long ties to NPS ... he is a former Dean of the NPS School of International Graduate Studies, served as a distinguished senior fellow at NPS' Center for Civil Military Relations, and was the founding director of school's Global Center for Security Cooperation.

"Who is your hero, who is it in your life that you are trying to be like ... And whose hero are you going to be?" asked Ord. "When in command, take command, lead, follow or get the heck out of the way."

Ord's leadership lessons stressed the importance of people. He admonished the graduates to care for one another and their subordinates, and challenged graduates to consider the importance of character in leadership, especially when serving as a role model for others. "One of the privileges of getting promoted is that you have the opportunity to help, to mentor, to coach and to be a role model for those under you and those that work for you," he said.

Ord offered advice drawn from his own career, and that of past military leaders. "Seek the tough jobs, volunteer for the tough missions and be the one to step forward when presented with a challenge," he said. "The uniform you wear is a badge of servitude, a badge of servitude to the Constitution, to the nation and to each other ... We on this stage have confidence that you will serve with dignity, respect, humility and with a focus on people." **IR**



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Encouraging Words

This collection of officers from various nations has a number of things in common. For one, they're all serving at NATO's International Security Assistance Force Headquarters (ISAF HQ) in Kabul, Afghanistan. In their varied assignments, these officers play lead roles in executing operational analyses for Afghan assessment, logistics and policy development efforts.

They are also all graduates of the Naval Postgraduate School's operations research program. The photo was captured in late 2012, and sent to OR department Chairman Dr. Rob Dell with the note, "I hope you and the other professors find it encouraging that your daily efforts build U.S. and allied analysis capacity and make a difference — sometimes years later and half way around the world!"

Pictured, from left to right, are Spanish Navy Lt. Cmdr. Pablo Alvarez; Turkish Army Capt. Fatih Cesur; U.S. Army Lt. Col. Jeffrey House; German Army Lt. Col. Jens Hartmann; U.S. Army Col. Bob Bradford; and, Turkish Army Maj. Hakan Kabalar. It was House, a 2005 graduate, who sent the photo along with the message to his former thesis advisor, Dell.

"My education at NPS has been invaluable in preparing me for conduct-

ing strategic and campaign assessments here at HQ, International Security Assistance Force," House wrote in a separate correspondence.

"In the Operations Research department, I learned how to effectively structure complex, ill-defined problems ... Processing disparate information streams, describing clearly what's going on, and identifying the driving factors that impact operational decisions — the 'so what?' in the data — adds great value to the commander. I really grew in my ability to do this while at NPS, and I've put these skills to use in every job I've held since graduating," he continued.

"When I arrived in Kabul, I was the fourth graduate of the NPS operations research program to join the Afghan Assessments Group. We all attended NPS at different times, had different thesis advisors, and specialized in different areas. Yet working through differences in language, service cultures, and national cultures never cost us one second on the job, because we all shared a common frame of reference. We knew everyone had a strong background in operations research, and this naturally increased the trust and confidence in each other's work."

Encouraging words, indeed!

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