



NAVAL POSTGRADUATE SCHOOL

IN REVIEW

MAGAZINE

JULY 2011

FROM MONTEREY

*From the sands of Iraq to the deep blue sea,
NPS delivers more educational programs than
ever to students across the globe.*

TO THE WORLD

INSIDE:

Adaptive Optics Center of
Excellence Established

Faculty Deploy, Deliver
Cultural Education to the Fleet

Current Research:
ICEX 2011 / IED Detection



Daniel T. Oliver
Vice Adm., United States Navy (Ret.)
President, Naval Postgraduate School

Our faculty extend the Naval Postgraduate School footprint far beyond the sandy shores of Monterey, touching nearly every corner of the globe. Through the application of modern information technologies and innovative ideas, NPS professors are delivering programs on nearly every continent that have never been closer to the classroom experience of our resident students.

PRESIDENT'S MESSAGE

Graduations come frequently at the Naval Postgraduate School, with few breaks through the course of the year and students coming and going every quarter. With each graduating class, I am privileged to have opportunities to sit down and speak with small groups of students in various informal settings – to engage them in personal conversation, and hear their stories and experiences while studying here at NPS.

I can say with definitive confidence that there are two common threads through many of these individual conversations. The first, nearly across the board, is that NPS is one of our students' favorite tours, and the second is that our students hold tremendous value for the education they have received. And that appreciation is not grounded in an intricate formula they've learned or a paper they've written, but rather in the core skills they have acquired – critical thinking skills that provide them with the foundational tools to be better decision makers and leaders throughout the rest of their lives.

This, ultimately, is the impact of the Naval Postgraduate School – a more effective collection of leaders to guide the United States Armed Forces, international partner militaries, and the Departments of Defense, Homeland Security and many others. And the result of all of this effort is at the heart of our mission, improved national security.

The reality, however, is that many of our prospective students simply will not be able to experience that first common thread – that tour at NPS' Monterey campus. And while I would wish all our students could immerse themselves in the complete NPS experience in residence, our mission is far too important to allow something as small as distance inhibit us from extending our impact onto the security of our nation.

In this edition of "In Review," we dive into the breadth and reach of our Distance Learning programs, which currently add an amazing 50-plus percent more future leaders to the total number of students we are impacting through education. Our faculty extend the Naval Postgraduate School footprint far beyond the sandy shores of Monterey, touching nearly every corner of the globe. Through the application of modern information technologies and innovative ideas, NPS professors are delivering programs on nearly every continent that have never been closer to the classroom experience of our resident students.

You will also read about other efforts beyond the university's core distance learning degree programs that extend our impact throughout the world. Initiatives such as the Regional Security Education Program, which recently delivered cultural awareness and education training to thousands of officers and Sailors embarked with the USS George H.W. Bush Carrier Strike Group while crossing the Atlantic. And through our blossoming relationship with the nation of Jordan, we are harnessing the power of education to help a nation in an ever-changing region provide its people with the stability of education.

As our graduations continue, and there will be another in just a few short months, I take great pride in knowing our impact is made around the world, whether a student is educated here on campus, or in countless locations across the globe. My only wish would be to congratulate each one of them with a handshake in person.



Page 12



Page 20



Page 22

NAVAL POSTGRADUATE SCHOOL IN REVIEW MAGAZINE

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FEATURES

10 A Center of Excellence in Adaptive Optics

A recent Memorandum of Agreement establishes the Naval Postgraduate School as an Adaptive Optics Center of Excellence in Education and Research.

12 From Monterey to the World

Through the rapid expansion of NPS' distance education programs and capabilities, the footprint of the university extends far beyond the seaside community where the campus lies.

18 Embracing Education Amidst Turmoil

The "Arab Spring" has given way to summer, but the era of change in the Middle East is far from over. Amidst neighbors in turmoil, Jordan turns to education to provide a voice to its people.

20 Cultural Education While Crossing the Atlantic

NPS' Regional Security Education Program puts faculty expertise and cultural education and training into the hands of Sailors where and when they need it most.

22 Current Research – ICEX 2011 and IED Detection

Reports on current student, faculty research efforts include mapping arctic keels in the frigid north, and finding new methods to detect personally-carried IEDs.

26 Conference Spotlights Foreign Policy in Africa

The inaugural Cultural and Organizational Awareness Forum casts a bright light on the continent of Africa, and the roles AFRICOM and DoD can play in building nation capacity in the region.

DEPARTMENTS

4 University News

7 Faculty Showcase

24 Spring Graduation



ON THE COVER

From its small campus situated near the sandy Monterey shores, the Naval Postgraduate School has quite a far-reaching impact – a global impact, in fact. Through advancements in technology and faculty willing to do whatever it takes to deliver class content, NPS Distance Learning programs deliver hundreds of degrees and certificates to students around the world. From a stealthy submarine in the deep sea to the deserts of Afghanistan, NPS takes graduate education from Monterey to the world.

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For more information about NPS, visit the new NPS NewsCenter at www.nps.edu/news. For free subscription information or to submit your comments or suggestions on "In Review" magazine, contact dmkuska@nps.edu.

Committee on the Future Meets to Develop Final Report

The Naval Postgraduate School's Committee on the Future gathered, May 24, for a full day to review and discuss the chapters

The Committee on the Future is using the school's legacy as a springboard to support, in a persuasive and compelling way, the continuation of its mission of exceptional education and research programs. For almost a year, the

The results of these efforts are reflected in each draft chapter – a rich mix of internal and external information that provoked thought and invoked lively discussions that will form the basis for the committee's final report.

Recommendations for NPS priorities in the future include establishing centers for cyber, energy and climate change education and research; marketing the "value" of NPS; developing unmanned systems; continuing leadership development; expanding international relations, classified facilities, and investment by other military services, civilian agencies, and international sectors; and using budget reductions to focus mission priorities.

(FAO) Conference at the Naval Postgraduate School in April, exposing Monterey FAOs to a variety of diplomats and experts through lectures, panels and keynote speakers. The FAOAM is an organization created by students and composed predominantly of students from all services attending NPS or the Defense Language Institute Foreign Language Center.

Diplomacy was one of the first topics of the conference with a panel composed of Ambassadors Richard Miles and Richard LeBaron, and retired Army Col. E. Michael Mensch. They touched on issues from the importance of promoting a positive and welcoming image of American institutions to maintaining a proactive warrior diplomat mentality while serving abroad.

"You, as members of the Defense Attaché Office, can relate to militaries in these countries in ways that civilians just can't do," said Miles. "That's a very important asset that you bring to the team."



Naval Postgraduate School's Committee on the Future

for their final report, which will be presented to university President Dan Oliver and Executive Vice President and Provost Dr. Leonard Ferrari on September 13, 2011.

nine working groups have been studying, collecting and evaluating research, benchmarking data, consulting with peer organizations, and conducting personal interviews.

FAOs Take Professional Development Into Their Own Hands

The Foreign Area Officer Association of Monterey (FAOAM) hosted its fifth annual Foreign Area Officer

NPS Grad Assumes Command of Navy Cyber Forces

Rear Adm. Gretchen S. Herbert, a 1991 Space Systems Operations graduate of NPS, assumed command of the Navy Cyber Forces during a Change of Command ceremony, June 22.

"Cyber is at the backbone of everything we do every day," said Adm. John C. Harvey, Jr., U.S. Fleet Forces commander. "The cyber threat is, as our president noted, one of the most serious economic and national security challenges we face as a nation. That is why your job is so important."

"Our focus will be on ensuring delivery of relevant, consequential and value-added

C5I capabilities to our Fleet," Herbert said. "We will measure our success by the development of a highly skilled, adaptable and capable workforce, and in equipping those professionals with reliable, sustainable and fully interoperable networks, systems, capabilities and processes. Understanding that the stakes have never been higher, we will ensure that our Sailors and civilians are ready to fight and win in the global cyber domain," she concluded.

Navy Cyber Forces (CYBERFOR) is the Navy's global Type Commander to organize,



Rear Adm. Gretchen Herbert

man, train, equip and maintain Cyber/C5I forces and activities to generate current and future readiness afloat and ashore. CYBERFOR reports to the

Commander, U.S. Fleet Forces Command, and serves as the Fleet Forces Command director of Fleet C5I and Command Information Officer.

The conference allowed Monterey FAOs the unique opportunity of attending a video teleconference (VTC) with one of the keynote speakers. “This is a very important forum,” said Rear Adm. Jeffrey Lemmons, Director of International Engagement, via VTC. “The entire FAO community has long been recognized for its expertise and the great contributions that they make to develop connections and trust.”

University Welcomes Top County Students for Annual Mathletics

The Naval Postgraduate School opened its doors to local math whizzes when the university hosted the 43rd Annual Monterey County Mathletics Competition, May 14.

Mathletics is an annual contest established to promote excellence in mathematics, and to recognize the achievements of local students and their schools. Coordinated by the Monterey County Office of Education, the event is made possible by donations and volunteers from the primary sponsoring schools, the mathematics department at California State University Monterey Bay and NPS.

Dr. David Nickles, NPS’ Director of Research Communications and Outreach, played a lead role in bringing the event to NPS, and was already well versed in the competition.

“I’ve been a big fan of Mathletics for 12 years dating back to my days as Science/Math Coordinator for the Monterey County Office of Education,” he said.

Nickles added that recognizing the fun in math is a primary goal of the competition, but the value in the annual event is far greater than just fun and games.

“Mathematics courses, especially algebra, are generally considered the gatekeepers to kids’

taking advanced science in high school, and in their later pursuit of science, engineering or technology careers while in college,” Nickles explained. “Becoming ‘Mathletes’ encourages children to practice mathematics – not only will they enjoy and not fear learning to abstract, but they will compete better in school and be acknowledged among their peers by showcasing their skill in answering challenging mathematical problems.”

Longtime Senator John Warner Awarded Honorary Doctorate

NPS honored former Senator John Warner with an honorary Doctor of Military Science degree, May 25, during a formal ceremony held on the university campus. A former Sailor and Marine Corps officer, Warner served as the 61st Secretary of the Navy before election to the U.S. Senate



Former U.S. Senator John Warner was presented an honorary Doctor of Military Science degree during a formal ceremony, May 25.

representing the Commonwealth of Virginia, where he served five-terms in office spanning more than 30 years.

“Senator John Warner has served his nation in many capacities,” said NPS President



Naval Postgraduate School Board of Advisors

NPS Welcomes BoA for Annual Spring Meeting

NPS welcomed members of the university’s Board of Advisors (BoA) for a series of meetings and campus tours, April 26-27. The BoA is a 19-member federal advisory committee that provides guidance to NPS on its operations and programs. The group meets twice a year to receive updates on campus happenings and to discuss areas of opportunity – from potential partnerships to budgetary decisions.

The meetings brought the board members from military, industry, research and academic institutions together for briefings on radiation safety, Committee on the Future, and an installation update on Naval Support Activity Monterey among many others.

Acting Board Chairman, retired Vice Adm. Lee Gunn, offered opening remarks to start off the two-day session, announcing the newest member of the Board, retired Adm. Timothy Keating, former Commander of the U.S. Pacific Command.

NPS President Dan Oliver addressed the group about the latest at NPS including a look at the budget, noting the upcoming renovations to Herrmann Hall and the Roman Plunge, and acknowledging some noteworthy achievements by NPS faculty. Oliver also praised the WASC Planning Group for their role in securing a ten-year reaccreditation, a huge victory and nod to the quality education provided to young officers, DoD civilians and international allies at NPS.

“I really believe in the power of the Naval Postgraduate School, and I think it needs to be embraced as the unique institution that it is. The Board of Advisors helps us achieve that,” said Oliver. “They serve as enablers of our mission, and assist in guiding the school into the future. Through the board, we have not only strengthened existing partnerships, but we consistently foster new ones.”

The Board includes members from across military and civilian institutions, including Rear Adm. Nevin Carr, Chief of Naval Research; Vice Adm. Marc Ferguson, Chief of Naval Personnel; and the Honorable G. Kim Wincup, Vice President of Science Applications International Corporation. Their combined expertise has enriched NPS’ academic programs and enabled discussion of ways to develop new partnerships with other academic institutions.

>>> continued on page 6

UNIVERSITY NEWS

« continued from page 5

Dan Oliver in his remarks opening the ceremony. “Senator Warner has an innate proclivity for public service in addition to a strong commitment to education, both of which have made him exceptionally deserving of an honorary doctorate degree.

“During his career in the legislature, Senator Warner stood steadfast in his unwavering commitment to our men and women in uniform,” added Oliver. “He has unapologetically acted in their best interests, even if it meant crossing party lines. His expertise in military affairs made him a respected member of the Senate Armed Services Committee, where he helped secure funding for critical warfighting capabilities.”

After formally presenting the doctoral degree, Oliver and university officials draped the ceremonial regalia over Warner’s graduation gown, signifying the colors and honors of a Ph.D. recipient in a commencement ceremony for one.

“I humbly accept this honor with the deepest sense of humility,” said Warner in his acceptance remarks. “I would like to say thank you to the generations of men and women that served in the United States military,

and as I reflect on this award, I would like to submit that education is an integral foundation for those men and women serving the armed forces.”

Moldovan Delegation Uses NPS as a Model for Postgraduate Education

Leadership of the Military Academy of the Armed Forces of Moldova spent several days on



Naval attachés representing 19 partner nations tour campus during the CNO’s Foreign Liaison Naval Attaché Spring Visit.

campus for an NPS site visit, May 23-28. The visit provided the Moldovan delegation – including Researchers Igor Sofronescu

and Diana Gudiuc and Academy President Mihail Buclis – with an overview of the university’s facilities, capabilities and resident expertise.

The Moldovan Military Academy is currently an undergraduate only school, similar to the Army’s West Point. The Moldovans are in the process of expanding the institution to include postgraduate degrees,

like NPS, and to do this, the academy will need to expand its current research capacity. While at NPS, the delegation

was briefed by several members of the university faculty on how NPS is structured and how it maintains a robust research capability.

NPS Hosts Foreign Liaison Naval Attachés

Foreign naval attachés representing 19 partner nations visited the Naval Postgraduate School, May 16–NPS was just one stop during their spring tour of U.S. Navy installations. These senior foreign navy diplomats spent the week touring Navy commands in the western United States to learn about the Navy’s capabilities and to be exposed to major cultural, industrial, governmental and historical aspects of the United States as part of the CNO’s Foreign Liaison Naval Attaché Spring Visit.

The naval attaché community listened to opening remarks given by NPS Dean of Students Capt. Alan Poindexter and were given overviews of the university’s mission, vision and operations by retired Marine Corps Col. Gary Roser, Asst. Dean of NPS’ School of International Graduate Studies. The group was then offered the opportunity to tour various labs and see demonstrations around the campus. **IR**

Retired Astronauts Turn Space Industry Leaders



Kent Rominger



Ken Reightler

Naval Postgraduate School alumni and former astronauts Kent Rominger (1987) and Ken Reightler (1984) have spent most of their lives involved in space exploration. And they show no signs of stopping.

After retiring from NASA, Reightler joined the development side, working at Lockheed Martin for over 15 years. Rominger, however, stayed on and became Chief of NASA’s Astronaut Office

until 2006.

Today, both men apply their problem solving skills at Alliant Techsystems, a Fortune 500 aerospace and defense company that works closely with NASA to develop new capabilities to further space exploration.

Rominger serves as Vice President of Strategy and Business Development, while Reightler recently joined the team as Vice President of Engineering Services.

FACULTY SHOWCASE



CEE Holds Strategic Communication Workshop for NAVEUR, 6th Fleet

An ongoing program at the Naval Postgraduate School's Center for Executive Education (CEE) is having a far-reaching influence on Navy senior leader development. In the program's latest installment, CEE held

Libya, where things are happening very fast, one of the challenges is getting clear guidance," said Thomas. "If you have a strategic communication process in place, the different parts of the government can work together more effectively to achieve the desired effects."

Attending the workshop were senior leaders of CNE-C6F,

on a tactical or operational level. "It's not just about good communication or knowing how to communicate," said Thomas. "It's about alignment, assessment and adaptation."

DoD's Chief Financial Officer Addresses Business School Faculty, Students

The Honorable Robert Hale, Under Secretary of Defense (Comptroller) and Chief Financial Officer for the Department of Defense visited NPS, May 13, to speak to Graduate School of Business and Public Policy faculty and students on the subject of financial management within the DoD.

During his brief, Hale spoke of the 2012 budget themes which consist of taking care of the people within DoD, focusing on the current war, modernizing for possible future conflicts, and supporting deployed troops. He also delved into the strategic challenges of an uncertain and dynamic environment that span the range of military operations,

competitors, global security and world-wide natural disasters.

Hale also noted proposed reductions for defense spending by \$400 billion over 12 years, and non-defense spending by \$770 billion. He commented on the need for a clearer framework for training and shaping the financial management workforce as the defense budget is clearly headed down in real terms. He said, "A well trained financial management workforce is key."

CID Highlights Infrastructure Protection Research

Protecting the critical infrastructures of the U.S. – power grids, oil and gas, transportation, communications, food and agriculture, water and others – is a key focus for the Departments of Homeland Security and Defense. And for the Center for Infrastructure Defense (CID) at NPS as well, where they routinely study vulnerability assessments and optimal investments for these systems.

Through CID, students explore potential catastrophic scenarios and the ability of each affected system to function through a worst-case disruption. Two recent examples – students Lt. Timothy Yuhas, Lt. Jason Iletto and Cmdr. Tino de la Cruz briefed leadership on their theses, analyzing two infrastructure systems in the Hawaiian Islands, and planning the emergency evacuation of citizens from the California Central Valley in case of a major flood.

Center Director, Assistant Professor Dave Alderson, noted that it's the unique military perspective of NPS' Operations Research department that gives the center an advantaged perspective of potential areas of vulnerability.

» continued on page 8



Adm. Samuel J. Locklear, III, Commander of U.S. Naval Forces in Europe and Africa (NAVEUR), kicks off an NPS Center for Executive Education Strategic Communication Workshop in Naples, Italy.

a Strategic Communication Workshop for flag officers and other senior leaders at Commander, U.S. Naval Forces Europe and Africa, U.S. 6th Fleet Headquarters (CNE-C6F) in Naples, Italy – at their request.

The workshop, headed by NPS Associate Professor and Strategic Communication (SC) program manager, Dr. Gail Thomas, presented basic SC principles to workshop participants, as well as best practices and challenges of SC relevant to the recent operation in Libya, Operation Odyssey Dawn.

"The SC workshops have become increasingly popular because of the important role that communication is playing in a world that has become more connected ... Commands desire to be more strategic and less reactive in their communication," said Thomas.

"When you have an event like

including NAVEUR Commander Adm. Samuel Locklear, III, who presented examples of SC concepts and explained how SC played an important role in Operation Odyssey Dawn. "We should see SC not only as alignment and synchronization," Locklear noted during the workshop. "SC should also be coupled with assessment and feedback to measure how we've done in an engagement or operation and adjust to improve."

Also participating in the workshop was Vice Adm. Harry Harris, Jr., Commander, Sixth Fleet, who led the Joint Force Maritime Component Command of Joint Task Force Odyssey Dawn. Harris reasserted the importance of SC in his concluding remarks.

SC includes a wide variety of tools and processes that play different and critical roles in achieving a planned effect



The Honorable Robert Hale, Under Secretary of Defense (Comptroller) and Chief Financial Officer

such as U.S. troops remaining deployed, proliferation of weapons of mass destruction, violent extremists, rising peer

FACULTY SHOWCASE



Faculty and students from NPS' Center for Infrastructure Defense gather following a research brief to university leadership.

« continued from page 7

“Our center is new, but the techniques that we use have been developed here at the Naval Postgraduate School over the last couple decades,” said Alderson. “Looking at the system through the eyes of an intelligent adversary, we wonder what parts

of an infrastructure we would target to achieve a given effect. How do we invest in a manner that makes this infrastructure resilient to disruption?”

“The Naval Postgraduate School is unique on the planet for its combination of scholarship

and knowledge of military technology and practice,” added CID Executive Director, Distinguished Professor Gerry Brown, a member of the National Academy of Engineering. “We are military planners who know how to play offense. This is key to assessing the capabilities of an intelligent adversary.”

CSRS Presents Course on Humanitarian Assistance and Disaster Relief (HA/DR)

In an effort to hone joint civil-military HA/DR response efforts, the Naval Postgraduate School's Center for Stabilization and Reconstruction Studies (CSRS) came together with the Office of U.S. Foreign Disaster Assistance's (OFDA) U.S. Agency for International Development (USAID) to present a Joint Humanitarian Operations Course to military and civilian students, May 2-5. The course served to strengthen and build upon existing

relationships as well as to help students understand their roles and responsibilities as they relate to HA/DR efforts by USAID, OFDA and the military.

Two USAID presenters brought more than 60 students through a series of lectures and case studies during a pair of two-day seminars that outlined the nation's response hierarchy in HA/DR missions.

“Students gained a better understanding of how the civilian side of the U.S. government works with the military in humanitarian assistance or disaster relief scenarios,” said Tom Frey, an instructor from USAID that co-facilitated the course. “USAID and OFDA looks forward to this type of discussion and engagement to share ideas. When we do end up working together with the military in HA/DR environments we are better situated to coordinate and synchronize our efforts.”

NPS' Center for Stabilization and Reconstruction Studies is

Quick Hits

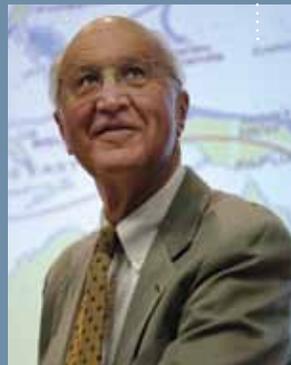


Dr. Knox Millsaps

Dr. Knox Millsaps, Professor and Chairman of Mechanical and Aerospace Engineering, has completed his six-year term as a member of the Board of Directors of the International Gas Turbine Institute (IGTI) within ASME.

While Chairman and Board Member, Millsaps led the expansion of cutting edge technologies such as steam turbines, wind turbines and solar cycles. He was a strong advocate for the industry and profession in Washington, and introduced new student and young career programs bringing IGTI funding to over \$1 million in scholarships.

Naval War College Monterey **Professor George Baer** gave his final lecture on Strategy and War in NPS' Glasgow Hall reflecting on the conditions for victory, and reasons for defeat, in the Pacific during World War II. Baer



Dr. George Baer

retired after 30 years of service on the faculty of the U. S. Naval War College (NWC), the last five of which were in the NWC Monterey Program at NPS.

Baer's career spans half a century. He previously taught at Harvard, Dartmouth College and the University of California Santa Cruz where he was twice chair of the History Department. At the NWC in Newport, he served 10 years as chair of the Strategy and Policy Department, and held the Alfred Thayer Mahan Chair of Maritime Strategy. He received the Navy's Meritorious and Superior Civilian Service Awards.

Distinguished Professor of Operations Research, **Dr. Patricia Jacobs**, has been named a 2011 Fellow by the American Statistical Association (ASA) Committee on Fellows for her outstanding contributions to the statistical profession. Jacobs is scheduled to receive her award during



FACULTY SHOWCASE

a practitioner-oriented teaching program that provides educational opportunities for the full-spectrum of actors that become involved in peacebuilding, peace and stability operations, and relief and development activities. CSRS accomplishes this purpose through a wide variety of short programs including workshops, games/table top exercises, conferences and applied research initiatives. The center also enriches the regular graduate degree programs at the university.

Applied Math Chair Surveys 100 Years of NPS Math History

Only Chairman of the Applied Mathematics Department, Dr. Carlos Borges, could make a century of math history fascinating, and that is precisely what he did during a special lecture, Apr. 14.

Beginning with NPS' origins in a 1909 General Order establishing the School of Marine Engineering

at the U.S. Naval Academy, Borges took the audience on a whirlwind tour of 100 years of NPS math, applied statistics/operations



*Applied Mathematics Chair
Dr. Carlos Borges*

research and computing history in a single hour.

In a moment that drew gasps from the audience, Borges revealed that he'd discovered the first book

purchased by NPS' predecessor while organizing the Applied Mathematics library—"Differential Equations" by William Johnson, published in 1906. "This isn't just the first book bought by the Mathematics and Mechanics Department," Borges stressed. "It's the first book purchased by the entire Postgraduate Department at Annapolis.

"The first civilian professor and second faculty member to be hired was Ralph Root ... after whom Root Hall is named – who joined the Postgraduate Department in February 1914 and headed its program in Mathematics and Mechanics," Borges said.

"After the end of World War I, the Postgraduate Department reopened in June 1919 under then Capt. and later Fleet Admiral Ernest J. King, after whom King Auditorium is named. Root worked with Capt. Spanagel, who headed the Postgraduate Department beginning in 1944 and after

whom Spanagel Hall is named, to transform the Department from a preparatory school to a university."

The lecture concluded with a review of the "four children" of the NPS Department of Mathematics: the Departments of Operations Research, Aeronautical Engineering and Computer Science; and the NPS Computing Center.

"Warren Randolph 'Randy' Church, after whom the computer center is named, became an assistant professor of Mathematics and Mechanics in 1938," Borges recalled. "Keenly interested in applying mathematics and statistics to anti-submarine warfare, he spent World War II on active duty. Later, as Chairman of the Department of Mathematics, he purchased the school's first computer – the very first NCR 102A – in 1953. The Math Department also acquired the first ever Cray supercomputer, a CDC 1604, in January 1960. It was Model 1, Serial Number 1," Borges said proudly. **IR**

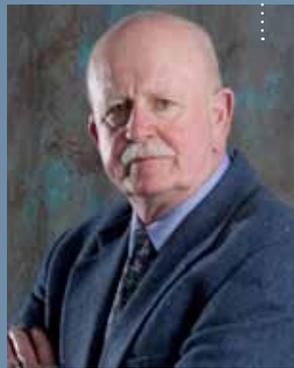


Dr. Patricia Jacobs

a formal ceremony at a Joint Statistical Meeting to be held Aug. 2 in Miami Beach, Fla.

Nominated by their peers, ASA Fellows are members of established reputation who have made outstanding contributions in some aspect of statistical work. Given annually, this honor is limited to no more than one-third of one percent of the ASA membership. The American Statistical Association is the world's largest community of statisticians and supports excellence in the development, application and

dissemination of statistical science through meetings, publications, membership services, education, accreditation and advocacy. Our members serve in industry, government and academia in more than 90 countries, advancing research and promoting sound statistical practice to inform public policy and improve human welfare.



Dr. Art Krener

NPS Professor of Applied Mathematics, **Dr. Art Krener**, has been named a 2011 Fellow of the International Federation of Automatic Control (IFAC). Krener is scheduled to receive the official citation at the IFAC World Congress in Milan, Italy later this year. The IFAC Fellow Award is given to persons who have made outstanding and extraordinary contributions in fields of interest to IFAC as an Engineer/Scientist, Technical Leader or Educator. Specifically, Krener's award will note his many contributions to the geometric theory of nonlinear control and estimation.

"IFAC is the most important international organization for control," noted Krener. "Being recognized as a Fellow is a very satisfying and gratifying honor." Krener is a Life Fellow of both the Institute of Electrical and Electronics Engineers and the Society for Industrial and Applied Mathematics.



This multi-million dollar Segmented Mirror Space Telescope, acquired by NPS in late 2009, is one of multiple experimentation test-beds the university can utilize for research and education in Adaptive Optics. With the establishment of the AO Center of Excellence, the three participating organizations – the Office of Naval Research, National Reconnaissance Office and Air Force Research Laboratory – are committing \$1 million each for the next five years to dedicated research and education programs in AO technologies.

Adaptive Optics Center of Excellence for National Security Established at NPS

By MCI Rob Rubio

JUST BEFORE EARNING her third star, then Air Force Maj. Gen. Ellen Pawlikowski, Commander of the Air Force Research Laboratory (AFRL), placed the final signature on the Memorandum of Agreement (MOA), completing the process to officially establish an Adaptive Optics (AO) Center of Excellence (CoE) for National Security at the Naval Postgraduate School, the only one of its kind in the country.

The MOA, between AFRL, NPS, the Office of Naval Research (ONR) and the National Reconnaissance Office (NRO), establishes a partnership to develop the advanced technologies that are critical for reconnaissance and directed energy missions within the Department of Defense (DoD) and the Intelligence Community. The center also benefits the DoD by educating students in these same adaptive optics and high-energy laser technologies, while also allowing researchers to develop technologies for risk reduction.

NPS President Dan Oliver remarked that the CoE marks an auspicious beginning of the work of educating our future leaders and is an exciting research opportunity for NPS. “I am proud that NPS will be part of this and am pleased to be partnering with NRO, AFRL and ONR,” said Oliver. “This is a big day and a big deal for us.”

Pawlikowski, who recently pinned her third star and is now

Commander of the Space and Missile Systems Center at the Air Force Space Command, remarked that establishing the AO CoE is critical to the success of the AFRL mission. She said, “The Air Force can’t do it alone and certainly has not cornered the market on accomplishment and capabilities. Entering into this collaborative agreement is important for our role within the Air Force and collaborating with the Navy and NRO is part of accomplishing that mission. The opportunity to exchange ideas and share is absolutely critical to our nation.”

Distinguished Professor Brij Agrawal of the Department of Mechanical and Aerospace Engineering played a major role in the establishment of the center. Serving as the AO CoE Director, Agrawal says he anticipates that it will have a powerful impact on NPS and future DoD systems.

“For NPS this is critical. It is a great honor and recognition that this campus has a Center of Excellence in Adaptive Optics for National Security,” he remarked. “It really brings NPS ahead of other institutions in that field. We have the unique test-bed, a unique facility here at NPS.”

“This CoE establishes NPS as a focal point for the kind of technologies important for future military capabilities. The SMT [segmented mirror telescope] and directed energy test bed will both be major contributors to that,” added retired Navy Capt. and Senior Lecturer Al Scott.

Each participating organization has its own distinct area of interest. NRO is focused on imaging, while ONR is interested in directed energy, and AFRL is interested in both. The unique role of NPS is that it currently has students in master's and Ph.D. degree programs studying all of these. Scott added, "The fact is that we are an academic institution but we are also in DoD, so we have a good connection with users of these technologies, which is a unique aspect of NPS."

From a DoD perspective, Agrawal notes that there are two primary benefits to having this CoE at NPS. First, this Center of Excellence will educate our military officers and DoD personnel in very challenging technologies through both classroom and hands-on experience. When these individuals go back to work in their respective fields, they will be better able to develop these technologies, as well as provide risk reduction in the development of future imaging satellites and high-energy laser systems. Agrawal notes that one of the main strengths of NPS is the invaluable opportunity for students to get that hands-on experience and multidisciplinary education and research.

Second, Agrawal adds, is that since NPS is an educational institution, it has the unique ability to cooperate and partner with DoD, industry, research labs and other universities.

The cornerstones of the AO center are the multi-million dollar segmented mirror telescope, which NPS acquired in December 2009, as well as development of its unique high-energy laser test-bed. In current ops, Agrawal explains, AO is used on airborne lasers with the objective to correct the laser's beam due to atmospheric aberrations. A beam can be highly focused as it travels through space, but then scatters as it enters the atmosphere, which diminishes its energy. AO takes care of the disturbance by compensating for that atmospheric distortion.

For higher orbits, we need larger telescope mirrors for the same image resolution, however, you do have the limitation on the launch vehicle when considering both the mass and the volume – the telescope must be light, stowed, launched and then deployed. This creates surface errors in the mirror, resulting in degradation of image quality.

Agrawal adds that Adaptive Optics techniques can be used to correct the mirror surface. Adaptive Optics sensors can be used to measure aberration in the optical beam due to mirror surface distortion, and the errors can be fed by using control laws to actuators to correct the segment alignments and surface errors. It is a very complex optics, structures and control problem.

Another desire is to test the use of multiple satellites as distributed telescopes that would combine to create a clearer image equivalent in quality to a large telescope. This approach would be cheaper, easier to launch and each can be replaced if one fails. Each segment of the SMT will be used as a separate telescope. This concept has many challenges including phasing of distributed telescopes.

Due to future DoD funding constraints, cost and schedule are major considerations for these systems. Agrawal notes that the goal of the center is to solve as many problems as possible through applied NPS student and faculty research. The center hopes that by using these technologies, we can have a robust design of these systems, thus reducing development cost by reducing analyses and testing.

Agrawal adds that the establishment of the Adaptive Optics Center of Excellence was, without question, a team effort.

Chairman of the Department of Mechanical and Aerospace Engineering, Dr. Knox Millsaps, and Executive Vice President and Provost, Dr. Leonard Ferrari, played lead roles in getting the initial funding for us, Agrawal says, providing resources for the first AO center labs. This funding was supported by local Congressman Sam Farr, Agrawal added.

Once initial funding was in hand, "It was the Provost who decided to fund the AO area," Agrawal said. "Dr. [Karl] van Bibber and I went out

The Air Force can't do it alone and certainly has not cornered the market on accomplishment and capabilities. Entering into this collaborative agreement is important for our role within the Air Force and collaborating with the Navy and NRO [National Reconnaissance Office] is part of accomplishing that mission. The opportunity to exchange ideas and share is absolutely critical to our nation."

Lt. Gen. Ellen Pawlikowski
Commander, Space and Missile Systems Center
U.S. Air Force Space Command

and met people and kept working for a year to make it all happen. NPS has identified this area of AO for the future."

The culmination of all of this hard work, Agrawal notes, represents a major goal for him. When he came to NPS 21 years ago, after working for 20 years in the communications satellites field at INTELSAT, many of his colleagues there considered this change as his mid-life crisis, he says in jest. He notes that he did, however, have two objectives. "The first was to make space systems engineering at NPS the best in the country. I think that we achieved that several years back," he said.

His second was to establish a Center of Excellence in multidisciplinary AO research to bring NPS ahead of other institutions in that field. "With this AO CoE being established, the second objective is now fulfilled," he said with a proud smile. **IR**



Then Maj. Gen. Ellen Pawlikowski, Commander of the Air Force Research Laboratory, places the final signature on the Memorandum of Agreement officially establishing an Adaptive Optics Center of Excellence for National Security at the Naval Postgraduate School, the only one of its kind in the country. The MOA is between AFRL, NPS, the Office of Naval Research and the National Reconnaissance Office.

FROM MONTEREY



From the sands of Iraq to crossing the Atlantic, modern technology allows NPS to deliver education anywhere, anytime. No wonder the number of students in off-campus degree programs has increased by more than 150 percent over the past six years.

One of the challenges of educating the men and women of the armed forces also happens to be one of the great strengths of the Naval Postgraduate School. With unexpected deployments and extensive duty commitments, the students of NPS share in the Armed Forces' collective sacrifice to serve the United States. But the university has set out to ensure that commitment doesn't keep any eligible officer, or DoD civilian for that matter, from receiving a quality graduate education.

From submarines in the deep blue sea to the deserts of Baghdad, NPS reaches students around the world through a rapidly expanding Distance Learning (DL) portfolio, offering defense-based degree and certificate programs no matter where they are. The programs bring the most relevant information to students, while still allowing them to fulfill their day-to-day duties to the Armed Forces and DoD.

When NPS President Dan Oliver released NPS' Strategic Plan in 2008, one of its clearly-stated goals was to "extend education to the total force." And the university has been quite successful in doing so, reaching more than 1,140 students in 2010 in degree and certificate programs offered through all four schools – the Graduate School of Business and Public Policy (GSBPP), Graduate School of Engineering and Applied Sciences (GSEAS), Graduate School of Operational and Information Sciences (GSOIS), and School of International Graduate Studies (SIGS).

"Our DL programs allow NPS' expert faculty to reach students who might not otherwise have a chance to receive a quality graduate education," said Executive Vice President and Provost, Dr. Leonard A. Ferrari.



While National Security Affairs Assistant Professor Scott Siegel appears to be standing in an empty room, to the contrary, his class is in fact quite full. Distance learning programs have expanded rapidly over the past decade at the Naval Postgraduate School. In 2000, just over 100 students were enrolled in degree programs via distance learning – in 2010, that figure stands at over 800.

"We are committed to ensuring our programs reach these students – active duty and DoD personnel that can benefit most from our faculty expertise and defense-focused programs, even if they are located on the other side of the world. In doing so, we are preparing them to better serve the mission of the Department of Defense."

One of NPS' major contributions to DoD is in the number of distance learning degree

programs offered, all of which uphold the same standards of high quality for which the university's resident programs are known. While DL degree programs are intended for individuals whose circumstances prohibit them from attending a resident program, the curricula and degree requirements are no more lenient than those for students on campus.

"NPS' DL programs are all integrated in the academic departments along with the



TO THE WORLD

By Amanda D. Stein



resident programs,” explained Vice Provost for Academic Affairs, Dr. Doug Moses. “They are taught largely by the same cadre of faculty as our resident courses, and NPS’ review and assessment activities assure the quality of its programs are equally applicable to the DL programs as to the resident programs.

“A real mark of our quality in DL,” continued Moses, “is the recent accreditation by the Accreditation Board of Engineering and Technology of our DL systems engineering program, as well as accreditation for a number of our DL programs in GSBPP by the Association of Advanced Collegiate

Schools of Business. This is a tremendous achievement for any institution.”

The reach of DL degree programs is vast, offering everything from space systems operations to software engineering, each with the same distinctive defense focus. And while faculty ensure the quality of the education remains in tact, advancements in technology impact the overall student’s experience as well.

“Robust technologies have been a long-time partner in ensuring our faculty are able to deliver the rigorous research and educational programs on campus that NPS has built its reputation on,” said Vice President for Information Resources and Chief Information Officer, Dr. Christine Haska. “With advanced technologies, such as video-teleconferencing, Elluminate Live and many others, our faculty are empowered with an ability to extend the educational experience to locations around the world – and it’s an experience that is as close to the residence program as possible.”

It’s all part of NPS’ overall mission to deliver relevant, quality graduate education to students, which means programs and curricula are constantly being assessed and updated, and are tailored to a specific field within the DoD where there is a need for educated leaders.

One of the more established DL programs, Systems Analysis (SA) in GSOIS, provides students with a comprehensive understanding of defense systems. Lt. Mason Berry is in his first quarter of the SA program, and noted that the flexibility of the program to work around his day-to-day duties is something that initially appealed to him. It appealed to his Commanding Officer, Cmdr. William

Murphy, as well.

“The Distance Learning program has allowed my staff officers to take full advantage of an educational opportunity that allows the military member both the adaptability and flexibility necessary to complete an advanced degree while serving in an active military flying status,” said Murphy, Commanding Officer, HS-10 (Helicopter Anti-Submarine Squadron 10). “I am a firm believer in graduate level education and learning avenues

“I believe advanced education provided to any member of the military community, whether civilian or military, can only enhance DoD’s workforce. The constrained resource environment of the military, and government in general, will require educated leaders and an educated workforce to carry out the leadership’s guidelines.”

Amy Coelho, EMBA 2011
Director of Budget
Navy Installation Command,
Washington, D.C

that allow my officers to enhance their career resumes are invaluable – particularly at a time when the Naval Aviation enterprise is in a military draw-down period and officers must do all that they can to compete and make

CONTINUED ON PAGE 16



SAN DIEGO

Lt. Chris Yost, stationed with HSM-71, and Lt. Mike Pangrac, stationed with HSC-3, are currently enrolled in the Master of Systems Analysis program and take their courses at the San Diego Distance Learning office on Naval Station San Diego (32nd Street).



BOSTON

“During the MET [Mobile Education Team] seminar, Boston’s leadership team was able to identify and discuss some of the key next steps our city must take to help improve our capacity as a community to prevent, respond to, and recover from a disaster.”
Don McGough, Director, City of Boston - Mayor’s Office of Emergency Preparedness



HAWAII

Hawaii is one of many locations around the world with cohorts of DL EMBA students. In the Spring 2011 Quarter, there were eight EMBA students studying on the Island of Oahu.



WASHINGTON, D.C.

Home to one of two NPS outreach satellite offices offering support to over 300 DL students in the D.C. area. On June 16, 2011, the EMBA program celebrated the graduation of its first civilian cohort, a group from across the Eastern U.S.



GERMANY

An 8-week course, “Cyber Security: Network Vulnerability Assessment and Risk Mitigation,” taught by NPS Senior Lecturer Scott Coté of GSOIS was a rather unique partnership with the NATO School in Oberammergau, Germany, as it was the first one taught in a hybrid format and that lasted longer than 2 weeks.

2010 DISTANCE LEARNING BY THE NUMBERS

312

DEGREES AWARDED
FOR DL STUDENTS

35%

AVERAGE DL STUDENT
POPULATION IN 2010
COMPARED TO 8% IN 2000



BOSNIA-HERZEGOVINA

The program, Engaging Women's Leadership in Security and Defense Institution Building, is part of a three year collaboration between NPS' U.S. Partnership for Peace Training and Education Center and the Bosnia-Herzegovina Peace Support Operations Training Centre to develop curriculum and draw attention to gender-related issues.



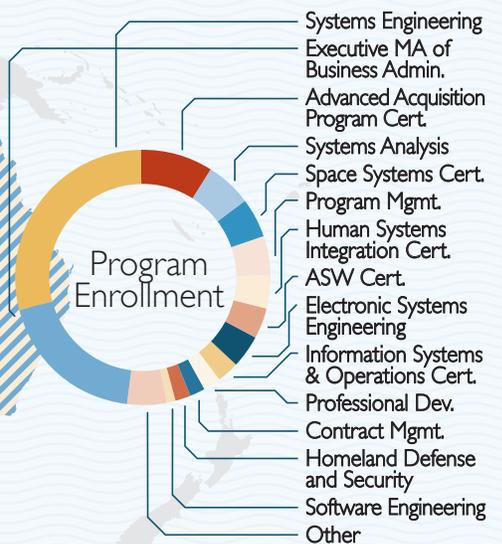
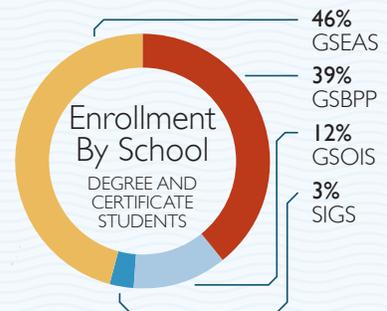
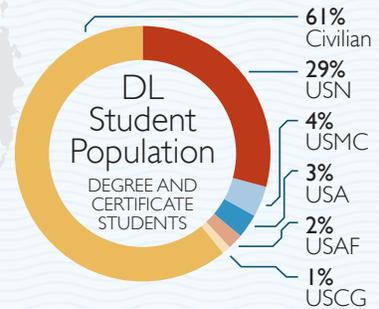
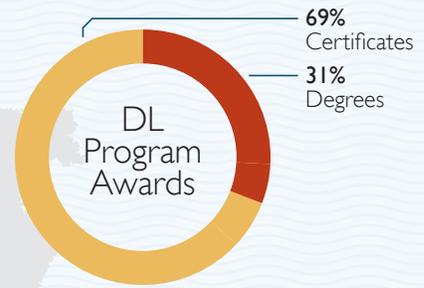
USS GEORGE H.W. BUSH, MEDITERRANEAN SEA

NPS' Regional Security Education Program (RSEP) is one of many Mobile Education Teams offered. Now hosting as many as 13 fleet visits per year, the regional experts spent two weeks aboard the U.S.S. *George H.W. Bush* providing cultural, language and political awareness to sailors deploying in the 6th Fleet AOR.



JORDAN

The Defense Resource Management Institute (DRMI) works closely with partner nations, such as Jordan, to host short courses in defense management and security affairs for military and defense leaders. Jordan's King Al Abdullah II also benefited from DRMI's short resident courses as a student in 1998.



2010 DISTANCE LEARNING ENROLLMENT

DRMI 2010 LOCATIONS

CCMR 2010 LOCATIONS

31+ 21-30 11-20 2-10 1

23,685 REGIONAL SECURITY EDUCATION PROGRAM STUDENTS AT SEA

46,826 SHORT COURSE PARTICIPANTS

\$46-\$69M PROJECTED SAVINGS FROM THREE 2011 EMBA CAPSTONE PROJECTS

61% CIVILIAN DL STUDENTS COMPARED TO 10% CIVILIAN RESIDENT STUDENTS

63% OF ENROLLED USN DL STUDENTS ARE UNRESTRICTED LINE OFFICERS

575-863% RETURN ON INVESTMENT FOR THE COMMANDS SPONSORING THOSE THREE PROJECTS



TOP: San Diego classroom of EMBA students taking Financial Management through video teleconferencing by NPS Senior Lecturer, John Mutty.



BOTTOM LEFT: Students in NPS' Distance Learning programs often develop close relationships with their thesis or capstone project advisors in spite of the miles between them. During the EMBA convocation ceremony, graduate Amy Coelho, left, Director of Budget, Navy Installation Command, Washington, D.C., got the opportunity to spend some quality time with her capstone advisor, Associate Dean Alice Crawford, right.

BOTTOM RIGHT: Frank Rendon, a retired Navy commander now serving as the Deputy Comptroller, Chief of Naval Personnel, Resource Management Division, discusses his EMBA capstone project with NPS President Dan Oliver and GSBPP Dean Bill Gates following the convocation ceremony.

 CONTINUED FROM PAGE 13

themselves stand out amongst their peers.”

As an Instructor Pilot with HS-10, headquartered in San Diego, Berry is also the Student Control Officer, helping support student pilots in their studies and serving as a mentor throughout their training.

“Being able to plan and be flexible a little bit, and not have to work each night for the next day’s class takes away a lot of pressure – especially if you are working in a place like a squadron,” explained Berry. “Often we don’t know our flight schedule for the next day until the afternoon of the day prior. It would be difficult to attend regularly scheduled classes everyday and hold down a job with a constantly changing work schedule.”

One of the largest DL degree programs, the Executive Master of Business Administration (EMBA), conferred 94 degrees in 2010, a number comparable to the resident degree programs.

“The [EMBA] program is designed to build on the management skills an officer develops during his/her early career, and then leverage those real-world experiences in an

executive graduate degree program which delivers the critical analytical and decision making skills needed to address the resource management challenges facing the Navy’s senior leadership,” explained Houda Tarabishi, EMBA Program Deputy Director.

In June, the EMBA program celebrated a first, the convocation of its initial all-civilian cohort. The group of 21 traveled from Tennessee, Rhode Island, Virginia and Washington, D.C., to receive their degrees, with GSBPP Dean Dr. Bill Gates congratulating the graduates, while also noting that their success is an important day for NPS’ EMBA program as well.

“Defense Department civilians require the same knowledge and skills as the officer corps, and use this knowledge every day,” noted Gates during the convocation. “It is very appropriate for NPS to extend the defense-focused education we provide military officers to the defense sector civilian population.”

Student Frank Rendon, a retired Navy Commander, currently serves as Deputy Comptroller, Chief of Naval Personnel for

the Resource Management Division. He was among this group of civilians presented with his EMBA, marking the end of what he called a stressful and rewarding journey.

“The overall education that I received through NPS will be quite useful in my daily duties as the BUPERS Deputy Comptroller of the largest and most diverse branch within N1 – with 136 active duty and reserve military, civilian and contractor employees,” Rendon explained. “The defense-focused EMBA program clearly supports my understanding in the performance of comptroller functions to include budget formulation, budget execution and accounting.”

Delivering quality graduate-level courses to students spread out around the world is no small feat, but as Haska noted, there a number of different technologies and methods of course instruction that allow the programs to be tailored to fit the needs of the student.

Video-teleconferencing (VTC) is a common method of delivery for DL course material, with NPS professors using VTC-equipped classrooms on campus to transmit

live video instruction to cohorts of students spread out across the country. Elluminate Live is another delivery method, using web-based video, in addition to document and information sharing. For the most hard-to-reach service members, hard copies of course materials are often shipped to their locations to review throughout their deployments – commonly used for submariners who do not have access to the necessary technologies while at sea.

These efforts are supported by NPS' Center for Educational Design, Development and Distribution (CED3), which provides students and faculty with the tools and assistance to navigate the DL process with ease.

"NPS' CED3 provides high-quality services to schools and departments and for our world class faculty – in both developing and distributing graduate education globally," explained CED3 Director, Tom Mastre. "CED3 facilitates the creation of instructional materials and provides administrative and student support, permitting the faculty to focus on their teaching and scholarship activities."

With extensive experience and the technology to effectively manage and deliver DL programs, NPS is also afforded the opportunity to rapidly develop and deploy new degree programs on the cutting-edge of Navy and DoD needs.

GSOIS is exploring a new DL degree program in Human Systems Integration (HSI), which teaches the human component of complex systems, filling a need within the operations and information sciences field for HSI personnel. The first cohort is scheduled to begin in the Fall of 2011 pending accreditation approval, and is open to senior level military officers and DoD civilians.

"The HSI DL masters program is extremely important in an acquisition environment where HSI is a key aspect," explained Mark Richter, a current HSI certificate program student and Program Manager, Marine Expeditionary Rifle Squad. "We do not have enough HSI practitioners with the knowledge to positively impact requirements and programs in a positive direction."

Another recent addition to the DL programs is the Master of Cost Estimating and Analysis program, a joint program with the Air Force Institute of Technology. The program aims to improve the management and cost estimation skills of DoD civilians and active duty personnel to meet the growing demands of the DoD.

In addition to the DL degree programs offered, NPS awarded 706 certificates in 2010 in topics ranging from cybersecurity to anti-submarine warfare to civil-military relations. The certificate and short courses are offered by all four schools, in a number of different areas of study, and range anywhere from hours-long to several weeks. The programs are generally offered to a target audience, such as local or international law-enforcement, military officers, or government officials.

NPS' Defense Resource Management Institute offers Mobile International Defense Management Courses and Analytical Decision Making Courses to foreign military partners and defense civilians around the world, including Iraq, Jordan, the Ukraine and many others. The programs look at responsible use of defense resources, strategic and operational level issues of defense management, risk management and decision-making through analytical concepts.

The Center for Civil-Military Relations (CCMR), in NPS' School for International Graduate Studies, also offers a number of short courses, from peace operations to combating terrorism.

Whether delivering degree courses to students in Germany, or short courses to Sailors at sea, the Naval Postgraduate School is committed to providing the most opportunities possible for military and civilian students, no matter where they are. It's just a matter of successfully executing the school's mission.

"I believe advanced education provided to any member of the military community, whether civilian or military, can only enhance DoD's workforce," said Coelho, the Director of Budget for Navy Installation Command in Washington D.C. "The constrained resource environment of the military, and government in general, will require educated leaders and an educated workforce to carry out the leadership's guidelines by challenging the business-as-usual concepts and military models by developing innovative methods to continue to fulfill the military mission." **IR**

IMPROVING HOMELAND SECURITY THROUGH MOBILE EDUCATION

NPS' Center for Homeland Defense and Security (CHDS) offers unique, mobile Executive Education Seminars that provide insight to current homeland security issue facing local, state and federal leaders.

These seminars target mayors, governors and their staffs and are tailored to meet the challenges of the jurisdiction in which the seminar is held. Often, the seminars are officials' first glimpse into issues surrounding security such as infrastructure protection, disaster preparedness and response operations.

The seminars have been delivered to 16 Governors in 13 states, including former Governor Arnold Schwarzenegger of Calif. and Governor Dave Heinemen of Nebraska.

"During the MET [Mobile Education Teams] seminar, Boston's leadership team was able to identify and discuss some of the key next steps our city must take to help improve our capacity as a community to prevent, respond to, and recover from a disaster," said Don McGough, Director of the City of Boston Mayor's Office of Emergency Preparedness.

METs have also been conducted in U.S. territories, such as Puerto Rico, and in late summer 2011 the team will conduct a seminar focused exclusively on the Pacific Islands.

"Continued education and citizen preparedness can make the difference in saving lives," said Luis Fortuño, Governor of the Commonwealth of Puerto Rico and a participant in a past MET seminar. "If we have an effective government, prepared to respond accordingly to any event, and we provide our people with the right information in terms of prevention, we would then have succeeded at the end of the day in terms of mitigation and response to different emergency scenarios."

To date, the CHDS MET have delivered over 200 seminars across the country, and have a full schedule planned for the months ahead. For more information about the CHDS MET and where they will be next, visit www.chds.us.





NPS Executive Vice President and Provost Leonard Ferrari, left, opens a cybersecurity workshop at Yarmouk University in Jordan. Sitting, left to right, are Dr. Muwaffaq Al-Omouh, Dean of Engineering at Yarmouk University; Dr. Wajih M. Oweis, Jordanian Minister of Higher Education; Dr. Abu Orabi, President of Yarmouk University; and, Mr. Larry Mandell, Deputy Chief of Mission for the U.S. Embassy in Jordan.

Jordan Embraces Education Amidst Neighbors in Turmoil

By Amanda D. Stein

IN RECENT MONTHS, many North African and Middle Eastern countries, including U.S. allies, have experienced substantial unrest and internal conflict in a period that has become known as the ‘Arab Spring.’ While there certainly is no single and simple solution to these extraordinary changes, for the country of Jordan, longtime U.S. ally and NPS alumnus King Al Abdullah, II, has relied on education, for both civilians and military, to give Jordanians a voice.

“Education is obviously central to the future,” said Abdullah. “It is an enabler, not only of productivity and success, but also, of responsible citizenship.”

Abdullah attended the Pembroke College at Oxford University and the Edmund A. Walsh School of Foreign Service at Georgetown University before taking courses through NPS’ Defense Resources Management Institute (DRMI) in 1998. He understands the value of not only a graduate education, but the importance of education in an international setting.

Since Abdullah’s time at NPS, the State Department has designated the university as the United States Partnership for Peace Training and Education Center (USPTC) – the only one in the country – giving NPS

even more opportunities to partner with the Jordanian Armed Forces (JAF) and local universities in training and education.

“Historically at NPS, there are many examples of U.S. students sitting side by side with international students in an environment that creates a richness on both sides,” explains USPTC Program Director Tom Hazard. “There is not only the education exchange which occurs, but also experience exchange and cultural exchange. The more opportunities that

“In fostering these partnerships, we were hoping that Jordan would serve as a sort of hub for the Middle East ... that through our relationship with Jordan, we will see more students from the Arab states coming to the Naval Postgraduate School, allowing us to use education as a communication vehicle between nation states with cultural and political differences.”

Dr. Leonard A. Ferrari
NPS Executive Vice President and Provost

we can find for academic interactions with militaries of other countries, as well as military civilians of other countries, the more value we provide for the overall mission of the school, and for the long term ‘partner capacity building’ objectives of both the DoD and the State Department.”

As the USPTC, NPS offers support to NATO members and partner

nations in their path to membership. Jordan is a partner nation in NATO's Mediterranean Dialogue, which has created opportunities for the JAF to receive training through the NATO colleges as well, in topics like peace-keeping, arms control and civil-military operations. While NPS partnerships are a small part of Jordan's educational initiatives, that role continues to grow, most recently when NPS Executive Vice President and Provost Dr. Leonard Ferrari signed two Letters of Accord (LoA), one with German-Jordanian University's Talal Abu-Ghazaleh College of Business (TAG-CB), and the other with Yarmouk University (YU).

"In fostering these partnerships, we were hoping that Jordan would serve as a sort of hub for the Middle East," explained Ferrari. "Right now, they educate military officers from a lot of Arab states. We are hoping that through our relationship with Jordan, we will see more students from the Arab states coming to the Naval Postgraduate School, allowing us to use education as a communication vehicle between nation states with cultural and political differences."

Following the signing of the LoA, NPS Computer Science faculty member Scott Coté taught a three-day cybersecurity workshop for Jordanian and visiting military, looking at network vulnerabilities from the perspective of potential adversaries.

He noted that not only was the topic of cybersecurity important to help Jordanians secure their networks, but it also stresses the value of ethical behavior, and how to recognize unethical behavior in others. The workshop was the first of many proposed training opportunities where NPS faculty with expertise in relevant fields can offer support for the JAF and civilian university students.

Partnership efforts with Jordan are ongoing, thanks in part to DRMI's Dr. Jomana Amara, who works closely with the JAF and the Embassy to establish new joint projects between NPS and Jordanian universities. She has been intimately involved in Jordanian relations for many years, and was awarded a Fulbright Scholarship in 2009 to study fiscal decentralization in Jordan at TAG-CB.

"I'm talking to Jordan's Director of Training, and am very impressed by how he perceives his role," explained Amara. "He is very aware of the role of education. He is a firm believer in all the concepts that we teach in good management – good resource management; good human resource management; issues of transparency; issues of accountability; promotions and positions based on personal ability, based on education. He sees where there is a need for further education and he is very anxious to put their very scarce resources into these fields."

One effort being discussed is the possibility of establishing a joint Ph.D. program with YU and the JAF, giving more graduate level students the opportunity to attend NPS. There are currently very limited Ph.D. opportunities for Jordanians.

DRMI is also looking at

deploying Mobile Education Teams to Jordan to provide human resource training to JAF leadership, with two training sessions scheduled for this year and three for next year.

Jordan's Queen Rania Al Abdullah is also known for her strong support of education, particularly for women and children. She sees education as a tool that can only strengthen her country, and help build a secure future for generations to come.

"I really believe that education is one of the most important issues that we can tackle," said Queen Rania last year in an interview with CNN, "because if you look at all the world's problems from poverty to hunger, disease, terrorism, climate change, not one of these problems can't be helped, if not totally resolved, through education ... If you want to deal with issues of terrorism and radicalization, what better way to do it than through a quality education?"

The King echoes the sentiment, noting that Jordanians are people who can overcome even the most challenging circumstances. With the Arab Spring changing into summer, Jordan's leadership has expressed a desire to strengthen international ties and move forward to create a stable future for the country.

"Our people are educated, cultured and are capable of shouldering their responsibilities," said Abdullah in a speech in February of 2011. "They are well aware that their interests, security, dignity and future are to me above any other consideration. And when I feel that there is failure in serving these basic rights, I take the right decision to protect and safeguard these rights. These rights are my top priority and they are a red line that I will not allow anyone to cross. My evaluation of anybody and any program is based on the extent to which they serve these rights.

"I know Jordanians," he continued. "I know their wisdom, I know their sense of belonging and commitment to their country and its well being. God willing, they will continue to hold their heads high and Jordan will always stand tall with dignity." **IR**



Attendees of a cybersecurity workshop at Yarmouk University in Jordan listen to the opening address by NPS Executive Vice President and Provost Leonard Ferrari. The workshop is just the beginning of what NPS and Jordanian leadership hope is an expanding partnership between the two universities.



While the aircraft carrier *USS George H.W. Bush* (CVN 77) steams across the Atlantic Ocean on her maiden deployment, NPS faculty teams are on board delivering a series of educational lectures and training on language, regional expertise and cultural awareness. The *George H.W. Bush* has been deployed to the U.S. 6th Fleet area of responsibility in support of maritime security operations and theater security cooperation efforts.

NPS Faculty Deliver Cultural Education While Deployed with the Fleet

By Amanda D. Stein

FOR SOLDIERS, SAILORS, Airmen and Marines deploying to unfamiliar regions, the challenging cultural, political and social differences can add to the pressures of the job at hand. Members of the U.S. military serve as representatives of their country, and are key to international relations and collaboration. The minute they step foot ashore overseas, each one of them becomes an ambassador for the United States.

The Naval Postgraduate School's Regional Security Education Program (RSEP) brings the experts directly to the fleet, working with the Center for Language, Regional Expertise and Culture (CLREC) to offer briefings on the regions to which the Strike Groups will be deploying. The objective is not to provide tactical information or intelligence, but to give military personnel an understanding of the operational relevance of their mission within a historical and strategic construct.

"RSEP is the only Navy program that delivers regional experts to deployed naval forces," explained Lt. Cmdr. Jim McMullen, Military Associate Dean of NPS' School of International Graduate Studies and RSEP Program Manager. "The program's primary focus is to provide graduate-level, regionally-focused education to senior leaders in order to enhance international engagement."

Most recently, the team briefed the leadership and crew of the *George H.W. Bush* Carrier Strike Group (GHWB CSG) for her maiden deployment, bringing a ten-day series of educational lectures and training on language, regional expertise and cultural awareness. GHWB CSG will be supporting maritime and theater security operations in the Fifth and Sixth Fleet Areas of Responsibility (AOR).

With over 300 sessions aboard the *USS George H.W. Bush*, the RSEP and CLREC team tailored lessons to include presentations ranging from the "History of Afghanistan" to the "Art of Speaking through an Interpreter," all with the goal of giving GHWB CSG's 6,000 sailors a better understanding of the region in which they will be working.

The value of cultural and regional understanding became clear after an attack on the *USS Cole* in the port of Aden killed 17 sailors in 2001.

"RSEP was an outreach initiative of NPS following the bombing of *USS Cole*," explained retired Rear Adm. Steve Loeffler, Senior Lecturer and Director of Program Development and Regional Security Education at NPS. "With many lives lost, and the investigation completed, the Chief of Naval Operations asked all the assembled Admirals why no one in *Cole's* chain of command understood the dangers of sending *Cole* into Aden to refuel, and why no one understood the political climate, and

problems in Yemen.

“Now, under new directives from the Secretary of Defense, the services are required to provide Language, Regional Expertise and Cultural Awareness (LREC) to all deploying forces. And RSEP is part of the Navy’s LREC program,” he added.

In 2008, the Chief of Naval Operations placed renewed emphasis on LREC, noting that education is key to not only understanding potential adversaries, but also to retaining allies. Because the oceans and seas border on so many countries around the world, it is critical that sailors understand the best ways to serve as representatives of the U.S. military while deployed.

“The number and variety of cultures and foreign languages the Navy faces in this new environment far and away exceeds the level faced in the Cold War,” wrote then Vice Adm. John C. Harvey, Jr. in a 2008 U.S. Navy Language Skills, Regional Expertise and Cultural Awareness Strategy. Now a four-star, Harvey at the time was Deputy Chief of Naval Operations for Manpower, Personnel, Training and Education, and is currently serving as Commander of the U.S. Fleet Forces Command.

“Strategic, operational and tactical success will depend to some degree on practical skill in less commonly taught languages,” he continued. “It will also require an awareness of unfamiliar regional cultures, many of which were long suppressed by foreign domination, and some of which are resistant to the 21st Century global system. Navy LREC competencies will be indispensable to penetrating cultural barriers, and understanding unfamiliar, ambiguous, and seemingly irrational behaviors. Considering the cultural and linguistic diversity of this new security environment, we will require comparably diverse LREC capabilities.”

RSEP has brought regional education to Navy and Marine Corps deploying forces since 2001, and continues to look for new opportunities to deliver information to military personnel of all ranks in the maritime domain. In its first year, RSEP averaged five programs per year. Today, it averages 10-13 annually, with growing interest from senior leadership. That growth has allowed the RSEP team to foster new relationships with regional experts at other universities to help provide the graduate-level briefings on all global issues and regions.

“When the program first began, our primary source was our own [National Security Affairs] faculty and other faculty with the regional expertise or knowledge of the issues at hand,” said Loeffler. “With the expansion of the program, we have significantly increased participation by faculty members from other universities including the Naval Academy, Harvard, Columbia and some of the University of California campuses.”

This year, RSEP has already delivered seven programs at sea, including 10 days with the sailors and embarked personnel aboard the USS *Ronald Reagan*. Rear Adm. Robert Girrier, Commander, Carrier Strike Group Seven, praised the team’s ability to provide relevant material for the Fleets’ AOR.

“RSEP seeks to prepare our forces to more effectively operate in a complex world where relationships matter, context counts, and perceptions have high potential to shape operational outcomes,” Girrier

noted in a letter of appreciation to NPS leadership.

“The cultural awareness and historical perspectives RSEP provides will help maximize the effectiveness of Ronald Reagan Strike Group,” he continued, “and our Navy team across our many lines of operation in a diverse world.”

The RSEP and CLREC team also recently visited the USS *Enterprise* Strike Group to prepare the crew and embarked personnel for operations in the Fifth Fleet AOR.

Rear Adm. T. B. Kraft, Commander of Carrier Strike Group Twelve, noted the RSEP team provided briefs beyond the planned agenda to touch on cultural awareness in Portugal, Bahrain and the United Arab Emirates.

“From my senior leadership to the most junior sailors and Marines, the feedback I received was overwhelmingly positive regarding the RSEP

“RSEP was an outreach initiative of NPS following the bombing of USS Cole. With many lives lost, and the investigation completed, the Chief of Naval Operations asked all the assembled Admirals why no one in Cole’s chain of command understood the dangers of sending Cole into Aden to refuel, and why no one understood the political climate, and problems in Yemen ... Now, under new directives from the Secretary of Defense, the services are required to provide Language, Regional Expertise and Cultural Awareness (LREC) to all deploying forces. And RSEP is part of the Navy’s LREC program.”

Rear Adm. Steve Loeffler, USN (ret.)

NPS Director of Program Development and Regional Security Education

and CLREC presentations,” said Kraft. “This was a positive and valuable experience both for those with previous overseas experience as well as those on their first deployment.” **IR**



NPS’ Regional Security and Education Program Team, from left, Michael Ruben, Steve Loeffler and Matt DuPee in the hangar bay of the USS *George H.W. Bush*. The team delivered over 300 cultural presentations to sailors during a ten-day stay aboard the carrier.



NPS Students Travel to the Arctic for ICEX 2011

By Amanda D. Stein

PART OF THE Navy's maritime domain includes the frigid and desolate frozen Arctic Ocean north of the Alaskan coast, where swiftly melting ice has researchers at NPS looking to fully understand the causes. From March 14-25, Undersea Warfare student Lt. Brandon Schmidt and Oceanography/Meteorology student Lt. George Suh took part in Ice Exercise (ICEX) 2011, a series of maritime experiments to ensure the Navy's technology is capable of operating optimally in extreme Arctic conditions.

Schmidt and Suh represented the Naval Postgraduate School in what is NPS' third round of student involvement in the exercises over the past six years. Schmidt and Suh used sensors and sonar to essentially map out the underwater upside-down ice "mountains," known as keels, that form beneath the surface. They hoped to determine what impact, if any, those keels have on the ocean-ice interaction that leads to melting Arctic ice.

"We found a large underwater ice feature," explained Schmidt, "and we used sonar to map it out and create a 3D image of the bottom of the ice. As the wind blows and moves the ice around, we are hoping to determine if those large underwater keels create enough turbulence to

cause mixing, and if that contributes to the decrease in multi-year ice."

Schmidt and Suh joined the ICEX camp, drilling into the ice to place their equipment in a way that would provide the data necessary to answer their questions. In ice approximately five-feet thick, the pair used a device called an ocean flux package, developed in Oceanography Research Professor Tim Stanton's Ocean Turbulence Group, to collect data in addition to sonar scans over the ten-day period.

"If the decrease in ice is significant, can we quantify it and put it into models?" Suh noted. "If so, we could make better predictions of the Arctic conditions to hopefully enable planners and policy makers to make better decisions for future ventures up there."

That data will later be sorted and evaluated, and used by Schmidt in his thesis. He is scheduled to graduate in March 2012. Suh graduated from NPS in March of this year, and has gone on to work at the Stennis Space Center as part of the Fleet Survey Team.

Their theses projects will help the Navy build a more comprehensive picture of the conditions in the Arctic, a region that is largely part of the maritime domain, and increasingly so as the ice layers melt.



U.S. Army Sgt. 1st Class David Davis, platoon sergeant for the security force with 2-45th Agribusiness Development Team, Oklahoma National Guard, leads the rear security element at the conclusion of a market walk in Sayed Karam, Paktia province, Afghanistan.

University Professor Explores New Methods of IED Detection

By MCI Grant P. Ammon

ONE OF THE most lethal, and understudied, methods of improvised explosive device (IED) attacks come in the form of personally-carried IEDs. Professor William Fox of the Naval Postgraduate School, along with colleagues from the University of California, Santa Cruz (UCSC), are seeking to improve early detection systems – and they have found that an ordinary piece of equipment can pinpoint would-be suicide bombers in a crowd.

In a recent experiment utilizing a standard radar gun, similar to the ones used for catching speeders on America's highways, Fox and UCSC researchers, Professor John Vesecky and Dr. Kip Laws, were able to detect



TOP: Two NPS students spent ten days in March at this camp in the Arctic, using sensors and sonar to study the impact of ice keels on thinning ice layers.

BOTTOM LEFT: NPS Undersea Warfare student Lt. Brandon Schmidt, right, and Meteorology/Oceanography student Lt. George Suh display the ocean flux package, developed in Oceanography Research Professor Tim Stanton's Ocean Turbulence Group and used to collect data and sonar scans over their ten-day participation in ICEX 2011.

BOTTOM RIGHT: Suh and Schmidt scan an ice keel using sonar during their ten-day research trip to the Arctic. The trip, sponsored by the Office of Naval Research, was part of the Navy's Ice Exercise 2011.

ICEX 2011, which utilized the USS *New Hampshire* and the USS *Connecticut* for submarine field experiments, brought out Secretary of the Navy Ray Mabus, a strong supporter of research and graduate education.

"You've got a lot of different scientific work that goes on here, you've got a lot of different educational work that goes on here, and a lot of different Navy tactical work that goes on here," said Mabus. "And it's for those reasons that ICEX is so valuable to us as a Navy and to our whole educational process in general."

The opportunity to travel to the Arctic, a trip that was sponsored by the Office of Naval Research, was one that Suh and Schmidt couldn't pass up. Stanton worked with the students to develop the right kind of problem for the Arctic, and to find an issue that would benefit the Navy.

"It's just an extraordinary experience and all of my students that have done this just remember it for the rest of their lives," said Stanton. "It's real problem solving, but not toy problems. These are very relevant and have to be tailored to something that two students can do. I feel we are good at that. We are getting the right kind of equipment, and the right kind of problems for them to come home and write up a terrific thesis on.

"With Oceanography, we have all of our students do a real field project now," he continued. "And it's really satisfying to see because the students get to take part in the planning and execution of the analysis. And that requires them to use problem solving skills also. So we are very pleased with how the project turned out." **IR**



members of a crowd wearing simulated IED vests 85 percent of the time.

"Using a standard radar gun to scan a crowd returns back a certain radar cross section," said Fox. "There is a particular signal in that cross section that returns differently when a person is wearing a wire on their body. It's subtle, but there are metrics we use to determine who is wearing wires on their body."

Fox noted that detecting body worn wires through radar signal interpretation can be accurate and effective, but stressed pairing it with additional indicators and technologies that would be able to distinguish would-be bombers from ordinary members in a crowd, ultimately providing operators with a more robust, in-depth picture.

"I'm trying to pick up on as many signals as I can to make flags come up, to say that person out there could be a suicide bomber," noted Fox. "Using radar guns to detect people wearing wires is the first trigger, the first signal.

"I think you can actually combine a lot of different technologies to pick bombers out of a crowd," Fox added. "We're currently looking at adding more sensors such as video feeds and infrared capabilities to detection

systems. We're trying to add as many things as possible to increase the probability of detection and lower the probability of false detection."

Motivation for the research came from Fox's desire to focus efforts on solving a real-world problem for troops on the ground, while funding for the project came from the Department of Defense's Joint Improvised Explosive Device Defeat Organization (JIEDDO), whose mission is to counter improvised explosive devices in Iraq and Afghanistan, and provide significant counter-IED capabilities to U.S. and coalition war fighters.

Early experimentation yielded positive results, however, Fox notes operational deployment of this detection technology might not take place until support is garnered and further tests can be conducted.

"I think if we said go, this technology could be out there in a year," noted Fox. "We have to go from proof of principle to putting the device together. Several proposals have been submitted back to JIEDDO, the Army Research Office and other places to continue the next phase of the research. We did it with a single radar and one kind of crowd, but now let's look at several radars, or maybe even different types of radars." **IR**



A tradition during every quarter's graduation is the Speaker's Breakfast, where select students are afforded the opportunity to engage with the commencement speaker in a more informal setting. Here, from left to right, retired Rear Adm. and EADS North America senior executive David R. Oliver, Jr., discusses qualities of leadership as students Lts. Elaine Reid and Nathan Matson listen in.

Veteran Industry Executive, Retired Rear Adm. David Oliver, Jr., Keynotes Spring Graduation Ceremonies

By MCI Rob Rubio

RETIRED REAR ADM. David R. Oliver, Jr., delivered a message of inspiration and change with his keynote address during the Spring Quarter 2011 graduation ceremonies, June 17, in King Auditorium.

In introducing the keynote, NPS President Dan Oliver remarked jokingly, "Some people confused him with me ... and although Dave and I are not related, as far as I know, I'm glad to know him as a friend and colleague and I'm always flattered when we are confused."

David Oliver is the Chief Operating Officer of EADS North America, a division of EADS, the second largest defense and aerospace company in the world. In addition, during his second administration, former President Bill Clinton appointed Oliver to serve as Principal Deputy Undersecretary of Defense for Acquisition, Technology and Logistics.

During his keynote, EADS' Oliver brought his variety of experiences as a military flag officer, Department of Defense leader, and industry executive to his presentation. He reminded the graduates that, given the education they had each received, an inflection point in their careers may soon be on the horizon.

"If you graduates will look up and down your row," he said, "In the

next 10 years, one of you in each row will have the opportunity to change history, which is not to say that the lucky one of you will seize that opportunity, for you may not."

He noted that history-altering moments do not come with a heads-up announcement. "They come when you are tired ... They are as ephemeral as a butterfly that rests on all its wings slowly moving in the corner of your eye, and when you see it, you may or may not recognize it," he said.

"If you are not prepared and do not recognize the situation for the uniqueness which it is, that iridescent moment will be gone the next time you open your eyes. There will be no record the butterfly existed. No one else will ever know history could have been altered, and history could be anything other than what it is for your children than what it is now, except you in your heart will know," he added.

The unique ability NPS graduates have to impact the world was a key message Oliver delivered to the 270-plus new alumni.

"You are in one of the few professions which can change history for America, and because of America's position in this world, you can change history for the world," he continued. "Free discussion requires

an atmosphere unembarrassed by any suggestion of authority. If a subordinate always agrees with his superior, he is a useless part of the organization. All men are by nature conservative, but conservatism in the military profession is a source of danger to the country.

“If you [are] ever fortunate enough to recognize the butterfly ... to seize the opportunity which will make your own row proud, I wish you well,” he concluded.

After the ceremony, graduates, faculty and guests enjoyed a reception in the Barbara McNitt Ballroom highlighted by the traditional cake-cutting ceremony with President Oliver, Navy League Award recipient Lt. Brian Phillips, keynote speaker David Oliver, and Executive Vice President and Provost Dr. Leonard Ferrari sharing in the honors.

David Oliver commented, “President Oliver and the faculty here have a great atmosphere and the students have taken advantage of it. It’s wonderful to see people interested in learning and interested in getting to know all the other cultures that are here. It is a wonderful part of our nation’s bigger goals. I appreciated the opportunity to speak.”

Ten days prior to the formal graduation ceremony, top faculty and students were recognized for their outstanding achievement at the Spring Quarter Awards ceremony.

Phillips officially received his Navy League Award for Highest Academic Achievement, and was actually the recipient of two awards, receiving the American Society of Naval Engineers Award for Excellence in Naval Engineering.

“NPS provided a team of players to include my program officer, thesis advisors and relevant operational research opportunities to be successful. The unwavering support of my spouse was crucial to my success here,” said Phillips. “The problem solving abilities that I learned here will be invaluable as I return to the Fleet to make decisions in my career field. There is a foundation here like none other available at any other institution to do relevant operational research and make it available to the warfighter today. My instructors were committed to my success and it has allowed me to depart with a provisional patent and several papers under consideration in national publications for my work.”

German Army Lt. Col. Karsten Struss was the recipient of two awards during the event, the Outstanding Academic Achievement Award for International Students as well as the International Student Award for Excellence in Regional or Security Studies.

“The difference between all of the international students is minor ... there certainly are others who could also have been selected to receive the award,” said Struss. “I had an excellent experience here at NPS with my focus on Middle East Studies and exchanging ideas with other students. It was an interesting subject area and I enjoyed the opportunity to study at NPS.”

Retired Cmdr. E. Cory Yoder, Senior Lecturer in the Graduate School of Business and Public Policy, received the Admiral John Jay Schieffelin Award for Excellence in Teaching. Yoder said that he was elated to get the award knowing the criteria to even be nominated. A '93 NPS graduate himself, Yoder noted that his success at the university, and his subsequent DoD and NATO tours, is directly attributed to his time as a student here. He says that he aspires to deliver the same commitment to developing and delivering quality graduate education to all of his students.

“I want to make learning challenging, but also fun and memorable. I want the students to get something out of my teaching and be able to use

the tools that they learn within and beyond their military careers. I don’t want to give training, but rather critical thinking skills at the tactical, operational and strategic levels of military acquisition and contracting. The focus is not just their next tour, but to acquire the tools to enable them to become future flag officers,” said Yoder. “My primary focus, since day one of my arrival, is the NPS institution. I strongly believe in our

“The problem solving abilities that I learned here will be invaluable as I return to the Fleet to make decisions in my career field. There is a foundation here like none other available at any other institution.”

Lt. Brian Phillips
Recipient of the Navy League Award for Highest Academic Achievement

mission and the empowerment it provides our stakeholders,” he added.

A total of 272 graduates earned 276 degrees, with 224 crossing the stage and 48 graduating in absentia. Of the 272 graduates, 114 came from the Navy, 15 Marine Corps, 32 Army, eight Air Force, two Coast Guard and two Army Reservists. The class included 66 DoD civilians and 33 international students from 20 allied and coalition nations. Degrees awarded were four Ph.D.s, 169 Masters of Science, 34 Masters of Arts, 44 Masters of Business Administration, 22 Executive Masters of Business Administration, one Mechanical Engineer, one Electrical Engineer and three dual degrees. **IR**



Spanish Navy Lt. Cmdr. Federico S. Perez Dueñas, an Operations Research graduate, proudly displays his colors following the ceremony. Perez Dueñas is one of 33 international graduates representing 20 allied nations this quarter.

Inaugural COA Forum Emphasizes the Importance of U.S. Foreign Policy in Africa

By MCI Rob Rubio

THE AFRICAN CONTINENT has long been recognized as a vast land with nations in various stages of transition – some nations seek prosperity with planned pathways to it, while others are rife with instability and corruption. Without doubt, however, is that the United States, specifically the U.S. Africa Command (AFRICOM), has a role to play in bridging the gap between volatility, and stability.

The inaugural Cultural and Organizational Awareness (COA) Forum, June 14-16 in Monterey, Calif., brought many of the various actors together to focus on Africa, and the role U.S. foreign policy and AFRICOM can play in supporting stability through enhanced partnership development and building nation capacity.

Organized by NPS in partnership with the Armed Forces Communications and Electronics Association (AFCEA) International, the goal of the conference was stated quite clearly at the outset by AFCEA President and CEO Kent R. Schneider who said, “This conference is about bringing communities together to talk about Africa.”

The effort began through the office of NPS Executive Vice President and Provost, Dr. Leonard A. Ferrari, who believed it was imperative to connect African stakeholders, diplomats and foreign policy experts – while at the same time offering NPS students the rare opportunity of learning from the advanced, candid dialogue on critical, real-world efforts.

“The Naval Postgraduate School is a hub of expertise in U.S. foreign policy and building partner nation capacity – where better than here to bring these stakeholders together to begin the conversations of collaboration,” said Ferrari. “And quite frankly, this was a tremendous

opportunity for our students as well, to attend and hear first-hand the challenges these nations face.”

Ambassador J. Anthony Holmes, Deputy to the Commander for Civil-Military Activities, AFRICOM, noted during his keynote that he wanted to dispel the assumption that AFRICOM is a traditional Combatant Command.

“We are about protecting American national security interests,” he noted, like most COCOMs, but added, “We are a tool of U.S. foreign policy.” Holmes said he believes Africa had traditionally been an afterthought in the foreign policy arena, but is actually a continent of tremendous potential and hope.

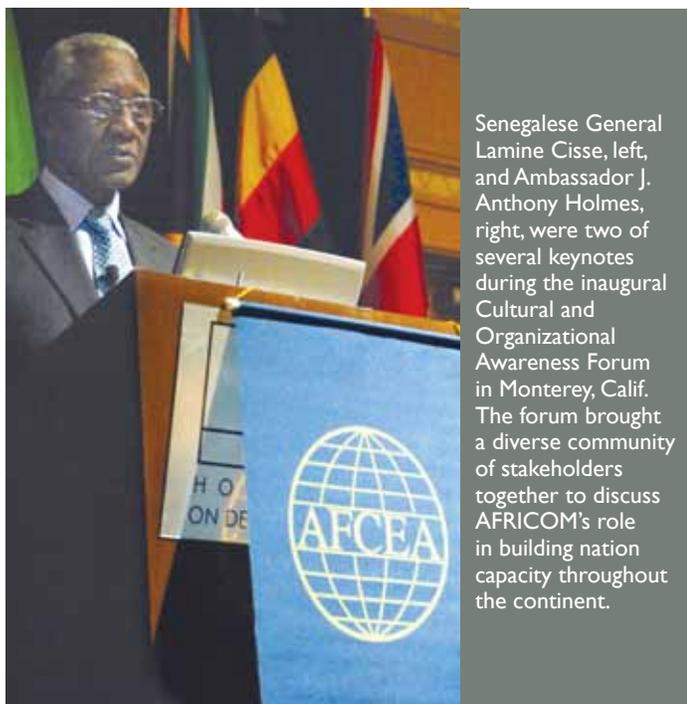
The Area of Responsibility (AOR) for AFRICOM is the entire continent of 53 countries minus Egypt. U.S. Embassies across the continent are the purveyors of executing our foreign policy strategy, but their resources are a challenge, like AFRICOM itself. He remarked, “The disparity of resources must be addressed.”

Ambassador Vicki Huddleston, Deputy Assistant Secretary of Defense for Africa, provided one of the forum’s final keynotes, and echoed Holmes’ sentiments on the unique role AFRICOM can play.

“AFRICOM is not a competitor, nor here to intervene in internal affairs, wars or conflicts in Africa, but to improve the capacity of African militaries professionally,” she remarked. “Everything that we do is in accordance with the framework and with the policy that is set principally by state ... AFRICOM has no desire to militarize the continent. AFRICOM wants to be valuematic to the diplomacy, democracy and development.”

She closed with an important message that she hoped would lead to continued dialogue. “Let’s try to be more flexible and try to push a little bit our African militaries to get into civil affairs. Our civil military is going out and working with the Kenyan military, to help them so that they can help the nation. That’s what the civil military should be doing,” said Huddleston.

As many of the presenters noted, the continent is diverse, and she concluded with optimism in the approach of the fledgling efforts. “I am a big advocate of the regional approach. We should be very pleased that we are working on these challenges with our partners – as full partners – and we are working together as a whole.” **IR**



Senegalese General Lamine Cisse, left, and Ambassador J. Anthony Holmes, right, were two of several keynotes during the inaugural Cultural and Organizational Awareness Forum in Monterey, Calif. The forum brought a diverse community of stakeholders together to discuss AFRICOM’s role in building nation capacity throughout the continent.





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NAVAL POSTGRADUATE SCHOOL NEWS CENTER

Practice What You Preach

Operations Research student Marine Corps Capt. David Coté is someone who puts his money where his mouth is. And when the “Marine Corps Times” awarded him with the Marine of the Year Award in July, it is in part because he does indeed practice what he preaches.

During his previous assignment at Marine Corps Recruit Depot San Diego, Coté was an avid proponent of Marines bettering themselves through education, helping scores of young USMC men and women enroll in technical college courses. It is also what brought him to the Naval Postgraduate School.

“I value higher education and I had to be an example to my Marines,” Coté says. “I always talk to them about seeking higher education, so I had to lead by example.”

The award is given to a Marine annually who does exemplary work beyond his or her operational duties. In addition to helping Marines further their educational goals, Coté has worked extensively as a volunteer with the National Kidney Foundation, advocating for organ donors and recipients ... he is himself a donor.

He also volunteers with an organization entitled Veterans Village, where he helps homeless veterans obtain medical, legal, counseling and housing assistance. It’s a passion, and like many things with Coté, it’s an issue he is committed to doing something about.

“I’d like to see every veteran who served this country – no matter what service, no matter what uniform – to have the ability to live under a roof in a safe environment, and have the ability to get a job and keep it,” he says.

And in spite of all his accolades and achievements, Coté will be the first to tell you he is not an exception to the norm. “In my mind, I’m not a unique individual,” he says, “I really think that every Marine deserves to be Marine of the Year.”

