DA Professor Selected for Cyber Hall of Fame

By Amanda D. Stein

In a nod to the dedication and influence of one of university’s exceptional faculty, NPS Department of Defense Analysis (DA) Distinguished Professor, Dr. Dorothy Denning, has been inducted into the National Cyber Security Hall of Fame’s first class. The group of 11, honored during an official ceremony on Oct. 17, were nominated and selected based on criteria that, among other things, distinguish them as leaders and innovators within the cyber security community.

“Dorothy Denning’s induction as one of the first members of the National Cyber Security Hall of Fame is an indication of the impact her body of work has had on the information security community over her decades in the field,” said DA Chairman and Professor, Dr. John Arquilla. “Having her on the faculty is a great addition to the DA department.”

Denning joined NPS in 2002, after teaching for 11 years each at Georgetown University and Purdue University. She first became engaged in information security as a Ph.D. student at Purdue in the early 70s.

“Cyber security is a field of growing concern for the defense community … It’s essential for our students to understand how to think critically about the challenges that come with this new strategic domain. Nobody supports this mission more effectively than Dorothy Denning.” – Dr. John Arquilla, DA Chairman

“Cyber security is a field of growing concern for the defense community, and cyberspace itself has, within the past year or so, been officially recognized as a warfighting domain,” Arquilla noted. “It’s essential for our students to understand how to think critically about the challenges that come with this new strategic domain. Nobody supports this mission more effectively than Dorothy Denning.”

Also selected for the first hall of fame class was former NPS Associate Professor Roger R. Schell, who served three years in the late 70s as a military instructor in the university’s computer science department.
The Graduate School of Business and Public Policy (GSBPP), one of four schools within the Naval Postgraduate School, is celebrating its 50th year granting defense-related graduate management degrees. The NPS commencement ceremony on June 1, 1961 included 74 students earning Master of Science (M.S.) in Management degrees, the first NPS degrees to prepare students for careers in defense sector management and administration.

As we reflect back over 50 years of graduate education, we see that our mission has remained the same, though how we meet that mission has evolved significantly. The M.S. in Management degree was first recommended during the 1959 Annual Postgraduate Conference, held at NPS. The conference record notes that, “The U.S. Navy Management School … through analysis of methods and procedures of other gigantic organizations, operated in our culture, allow[s] them [our graduates] to introduce into the naval establishment new or improved concepts related to the management of men, material and money which will be consistent with achieving maximum combat effectiveness of the Navy.”

Our mission remains largely unchanged. As our name implies, the GSBPP’s unique focus draws on best practices in business management, public administration, and public policy to prepare our students for senior management positions that oversee a broad spectrum of defense sector resource allocation decisions. Our dual accreditation by the National Association of Schools of Public Affairs and Administration and the Association to Advance Collegiate Schools of Business reflects our emphasis on integrating novel public and private sector management practices to improve defense resource management and operational effectiveness.

However, GSBPP’s programs, students and faculty have grown, diversified and improved in quality during our 50-year evolution. The Navy Management School, as it was called in 1961, boasted a faculty of nine, including just one member with a doctorate. The school offered one degree, a 10-month M.S. in Management. The first graduating class almost exclusively included naval officers from the U.S. Navy and U.S. Marine Corps.

GSBPP currently features 67 full-time faculty members, 50 of whom hold doctorates or other terminal degrees. GSBPP offers two resident degrees covering 12 different curriculum concentrations: an 18-month Master of Business Administration (MBA) and a 21-month M.S. in Management. GSBPP also offers three part-time distributed (non-resident) degree programs (an Executive MBA, an M.S. in Program Management, and an M.S. in Contract Management), one four-course graduate-credit certificate program, and several non-credit certificate programs.

Finally, GSBPP has 618 students enrolled in degree programs, 263 full-time resident students and 356 half-time, non-resident students, plus over 100 students in the graduate certificate program. Our students represent all military services, international militaries (about 15 percent of the resident population), and defense department civilians (46 percent of our non-resident degree students).

GSBPP offers an extraordinary confluence of students with operational military expertise, a world-class faculty involved in defense-relevant management research, and flag-level sponsors that oversee our curriculum and research, and employ our graduates and research results.

Over the next 50 years, we expect further growth, improvement and diversification in our programs, students and faculty — our steadfast commitment to our primary mission will remain unchanged.

“A Message From …
Dr. William R. Gates, Dean, Graduate School of Business and Public Policy

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“Update NPS” is a monthly publication for students, faculty and staff of the Naval Postgraduate School produced by the Office of Institutional Advancement. For additional copies, comments, or to suggest story ideas, contact the editorial staff at update@nps.edu.
NPS Graduate Honored with Navy’s Coveted Stockdale Leadership Award

By Kenneth A. Stewart

NPS alumnus Cmdr. Chase D. Patrick has been honored as one of two recipients of the Vice Admiral James Bond Stockdale Award for Inspirational Leadership — the awards will be presented during a special ceremony in the Pentagon in November.

One of the Navy’s premier honors, the Stockdale Award is given annually to two naval officers below the rank of captain — one from the Pacific and the other from the Atlantic Fleet — who demonstrate exceptional leadership and are recommended by their peers.

Patrick studied operations research at NPS, and is well remembered by his advisors at the university.

“Cmdr. Patrick was an exceptional student … His work was an outstanding demonstration of the kind of insights that can be gained by using relatively simple simulation models in smart ways,” said Dr. Arnold Buss, a research associate professor in NPS’ Modeling, Virtual Environments and Simulation Institute.

Patrick also recalls his time at NPS, crediting the university with helping him to think critically, and to develop mental discipline.

“You cannot underestimate the role of critical thinking, that is one of the things that NPS did for me … [NPS faculty] were very challenging and they forced me to apply my analytical skill sets,” said Patrick. “Studies at NPS allowed me to apply critical thinking and mental discipline, the ability to approach problems in a methodical manner.”

Patrick was recommended for the Stockdale Award after commanding the USS Chafee — an Arleigh Burke-class guided missile destroyer stationed at Pearl Harbor, Hawaii — by the ship’s current commanding officer, Cmdr. Justin Kubu.

“I felt compelled to recommend Cmdr. Patrick for the award for the record of achievement and culture of excellence on the Chafee during his tenure as commanding officer … Much of the success I have enjoyed in command is directly attributable to his lasting leadership,” said Kubu.

Patrick sought from his first day in command to make the Chafee a special place to work. Frustrated by the conduct of some of the Sailors under his command, he embarked upon a plan to instill professionalism throughout his organization.

“I was committed to a work environment where everyone was treated with dignity and respect … my expectation was that our work environment would radiate professionalism,” said Patrick. “If you have a work environment that is characterized by negative energy, hostility, poor behavior … chances are, [crew members] are not going to be able to maximize their potential.”

Patrick believes that the work environment created was characterized by the five words that make up his command philosophy, “Mission Accomplishment by Navy Professionals.”

“To maximize the success of the people assigned to me, I have to make them the very best professionals that I can. If you do that, it has to make you better as an organization,” said Patrick.
Army’s Cyber Commander Explores NPS Education, Research

By MC1 Grant Ammon

Commanding General of U.S. Army Cyber Command/U.S. 2nd Army Lt. Gen. Rhett A. Hernandez spent two days at the Naval Postgraduate School for an exploratory visit to the university, Oct. 1–2. While on campus, Hernandez and members of his official party toured NPS facilities, met with key faculty members and listened to student thesis presentations. The visit provided Hernandez and his staff an opportunity to build partnerships between his command and NPS.

“This visit provided an opportunity for our command to look hard at the educational capability of NPS, and how we can leverage the power of what the university is already doing from a cyber perspective,” noted Hernandez. “I was very impressed with the passion and energy from the faculty and students here.”

According Army Maj. Joshua Bundt, an NPS student who was hand-picked to deliver a brief to Hernandez and his staff, the opportunity to provide an overview of his research to a senior military commander was an honor.

“I was selected by members of the Cyber Academic Group to deliver my thesis topic, and it was an absolute honor to present my research idea to the commander of Army Cyber Command,” noted Bundt. “All the student presentations were well received by the general, who showed knowledgeable interest in each student’s research question and emphasized the importance of the ongoing cyber related research at NPS.”

Noting the operational relevance of the research conducted at NPS, Hernandez complimented students and faculty alike on their efforts in the cyber domain.

“The research I’ve seen presented here at NPS has been first class,” noted Hernandez. “Most important is the operational relevance of all the subjects I’ve seen. It’s things that military officers have learned over the last 11 years of war that they have been able to bring back to the educational system and examine.”

While Hernandez’ visit to NPS was exploratory, his outlook on the developing partnership between the soldiers and civilians he leads was positive.

“I look forward to the continued partnership with Army Cyber Command and NPS,” noted Hernandez. “I recognize the work we have done together in the past is as significant as the work we are doing together in this new domain of cyber.”

Hernandez assumed command of Army Cyber Command/2nd Army in October of 2010. Army Cyber Command/2nd Army plans, coordinates, integrates, synchronizes, directs, and conducts network operations and defense of all Army networks; when directed, conducts cyberspace operations in support of full spectrum operations to ensure U.S./Allied freedom of action in cyberspace, and to deny the same to our adversaries. The total command strength will exceed 21,000 Soldiers and civilians and will be funded from within existing fiscal resources.

NPS Celebrates Opening of Systems Engineering Laboratory

The NPS Department of Systems Engineering opened the university’s newest research lab, the Advanced Robotic Systems Engineering Laboratory (ARSENL), Oct. 31. Providing a diverse academic and research venue, ARSENL fosters the holistic, multidisciplinary approach to the design, employment and future concept development of robotic and unmanned systems.

“ARSENL provides a venue for fostering cross-disciplinary collaboration between students and faculty across the campus,” noted ARSENL Director, Dr. Timothy Chung. “The lab has stations for physically building, testing, and programming robots, such as unmanned aerial vehicles (UAVs) situated next to computation, modeling and simulation resources, that involves students from a variety of disciplines. Getting all of these students to sit in the same lab and share information is really part of a rich graduate education experience.”

Students participating in ARSENL include representatives from all naval unmanned systems domains, five countries, and more than six different academic departments across the NPS campus.
Regional Education Leaders Discuss Collaboration, Shared Vision

By Kenneth A. Stewart

The presidents of several area colleges and universities joined 17th District Representative, Congressmen Sam Farr, and NPS President Dan Oliver on campus for a candid discussion on a wide range of topics, including the economics of higher education and opportunities for collaborative educational and research programs.

“Dan Oliver and I served as co-chairs of the Monterey County Business Council’s Higher Education and Research Cluster, and are bringing together the various educational institutes to identify and collaborate on projects and economic activities,” said Monterey Peninsula College President, Dr. Doug Garrison.

The Monterey County Business Council is an alliance of executives, professionals and organizations that helps business, government, education and community leaders from myriad backgrounds work together on countywide issues.

Waging Peace, NPS Students Develop Peace Gaming Model

By Kenneth A. Stewart

Students working in conjunction with NPS, as the United States Partnership for Peace Training Education Center, recently presented a computer driven “peace gaming model” at the annual International Association of Peace Training Centers Conference in Helsinki, Finland.

The theme of this year’s conference was, “Effective Peacekeeping and Peacebuilding: Challenges for the Training Community.” Senior international military officers, diplomats and non-government organization representatives attended the conference.

German Army Capt. Danny Heerlein and U.S. Navy Lt. Cmdr. Matt Powers presented the Abyei Peace Gaming Model on behalf of their development team. The model is a tool that developers hope will improve the capabilities of civilian, military and non-profit agencies to respond to mass atrocities.

The model was built in response to a request from Navy Lt. Cmdr. Ryan Klaahsen of the U.S. Marine Corps’ Combat Developments Command. Klaahsen approached NPS’ operations research department looking for a “wargame” to explore Mass Atrocity Prevention and Response Options.

“We have to measure the value of the intellectual capacity of the institute,” said Farr. “NPS is receiving growing recognition from its graduates that are doing important things all around the world.”

Economic impact was an important topic of discussion, but so too was collaboration. NPS is working with several local schools to collaborate on important research and to provide internship opportunities.

“A number of our students come to NPS to take classes, and our faculty collaborate… There is a lot of ways that we complement each other,” said Monterey Institute of International Studies President Dr. Sunder Ramaswamy. “The faculty and students build the bridges, but as president, I hope for even more future collaboration.”

Farr recognized both the economic and intellectual contributions of the local institutions of higher learning.

“Usually we focus on kinetic operations, army vs. army, but the work we are doing with NPS is helping us to plan for mass atrocities,” said Klaahsen. “We are trying to teach our planners to successfully conduct conflict resolution and peacekeeping operations.”

It is these conversations that Senior Lecturer, Dr. Jeffrey Appleget, believe will ultimately lead to more successful peacekeeping operations.

“This model will allow planners to approach the peace keeping process, in the same manner that military planners prepare for combat operations,” said Appleget.

The model was developed in Appleget’s war gaming class at NPS. He teaches his students to understand the war gaming process and then works with them to develop models in response to the sponsor’s planning needs.
It may not be immediately obvious how a focus in environmental resource policy could lead one to ask the tough questions about the privatization of global security, but for NPS national security affairs (NSA) doctoral student Cmdr. Dan Straub, the privatization of any number of things — from water to security — brings with it potentially critical implications.

“The privatization issue is really important to me,” explained Straub. “I started out looking at water scarcity. And what I saw was that real conflicts were occurring around the privatization of scarce resources.”

After consulting with professors in the NSA department, Straub began to see a bigger picture emerging of privatization issues, and how wartime security has been privatized with the use of defense contractors. In his dissertation, Straub explores the idea of using global security companies in peacekeeping efforts, and what kinds of complications arise when doing so.

One issue that Straub points to is the possibility of criminal activity or misuse of power by privatized security companies while overseas. While such crimes, if committed by members of any armed forces, would be handled through official channels, privatized security companies don’t have the same regulations and protocol.

“The Uniform Code of Military Justice in the United States covers U.S. soldiers, sailors, airmen and Marines. But a contractor, the first thing that happens is the company fires the employee, and the individual gets sent back to the United States,” he explained. “And it’s very difficult to prosecute a crime that takes place somewhere like Iraq or the Democratic Republic of Congo back in the United States without the evidence, and without really a proper investigation by the authorities who are supposed to be doing the convicting.”

While privatized security companies may differ from military in the way that punishments are handled, Straub says they are no different in their roles as representatives of the country by which they are sent. Distrust among locals for the security companies could translate to a disruption in relations between countries, particularly when criminal activity is at the root of the distrust.

What Straub concluded from his research is that the proper mechanisms are not yet in place for private security companies to be routinely used in peacekeeping operations. He noted that such companies are indeed being used by the United Nations for security purposes, but that the policies and guidelines in place for contractors are not yet sound enough to avoid the legal, political and logistical challenges, should problems arise.

“What I concluded, based on the pros and cons, is that until a unitary policy with regard to the use of private security companies and peacekeeping is developed — and vetted through all of the member states of the United Nations, and approved — private security companies should not be used for peacekeeping.”

He stressed that both sides are still trying to figure out the extent to which privatization can be successful, but that it’s not something that will simply go away. The policies need to be explored and established if contractors and armed forces are to safely and effectively execute peacekeeping operations.

“Where does the service member’s job end, and where does the contractor’s job begin?” Straub asked. “It’s a continuum, and finding a place on that continuum is, right now, a moving target.”

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Research Associate Doug Seivwright knows firsthand the kind of support that students want and need during their studies. Prior to joining the mechanical and aerospace engineering team in 1992, Seivwright, then a Navy lieutenant, graduated from what was NPS’ aeronautical and aerospace department.

Today, Seivwright is retired from the service, and teaching in the structures track while managing the university’s Marine Propulsion Laboratory (MPL).

“We have a course in here that introduces students to principles of power and propulsion systems. We use the MPL to supplement MAE classroom instruction by having students gather data and calculate the performance of the platform based on what they’ve learned in the classroom,” Seivwright explained. “We have two test rigs, one is a diesel engine platform, and the other is a gas turbine platform, and they are both used in that propulsion course.”

Seivwright is also a registered professional engineer, and serves as the building manager for Watkins Hall. He is currently working on ensuring that the department’s labs are being represented in the planning for the upcoming heating, ventilation and air-conditioning upgrades to the building.

“Doug is essential to the operations of the department as the lab manager for the MPL and the building manager for Watkins,” said MAE department Chairman Knox Millsaps. “His support for the lab upgrades has been critical for supporting courses and our research in biofuel combustion.”

Seivwright says he enjoys the variety he encounters in his day-to-day duties, and providing support for the department in any way he can.
Any Day at NPS ...

Over the last quarter, the NPS President’s Student Council has achieved a number of goals and continues to make headway on several projects. We’ve increased active membership by over 50 percent, and have established representatives in every academic department. A new philanthropic committee is organizing ways for students to give back to the community, such as our upcoming holiday clothing drive for the Veterans Transition Center on Fort Ord. An ITACS committee is pushing for improvements to the Intranet and how the school communicates with students. The SGL committee is developing a post-SGL survey so students can help shape the type of future speakers. A project is underway to create a student textbook exchange that will reduce costs and eliminate shipping. Finally, the events committee is supporting the Pearl Harbor Remembrance Dinner on Friday, December 7 (for more information go to www.nps.edu/pearlharbor).

In addition to these projects, the Student Council is also revising how we conduct elections and is working on developing an online voting capability. We will hold elections for chairman, vice-chairman, and recorder in November; these positions are open to the entire student body. Expect more information on election procedures in the coming weeks.

The Student Council is comprised of motivated individuals from all services and several countries. All NPS students are encouraged to join. If you have an issue that you’d like to bring to our attention, or if you’d like more information on becoming a member, please e-mail us at StudentCouncil@nps.edu.

Have a story to share? Institutional Advancement is constantly seeking interesting news and stories for Update NPS. Send your tips to update@nps.edu.
Historical Highlights

In recent years, NPS faculty and student research has yielded many important discoveries and developments that have advanced military programs and systems. Annual research grants now total more than $200 million a year — a significant leap from the immediate post-World War II era.

In 1947, as faculty waited for President Harry Truman to sign an appropriations bill to purchase Hotel Del Monte, the Secretary of the Navy commissioned a study by the American Council on Education, chaired by Dr. Henry Heald, founding president of Illinois Institute of Technology. The committee noted that, “a serious obstacle to research at the present time is the space problem … faculty members (are) crowded six to eight to an office … (and) there is virtually no nook or cranny of space available for faculty research laboratories.”

After NPS moved to Monterey, it earned provisional accreditation from the Western Association of Colleges in 1955.

Historical Highlights are provided by the Dudley Knox Library.