



NAVAL
POSTGRADUATE
SCHOOL

IN REVIEW
JULY 2006

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*Student works with an autonomous robot, a six legged tractor
that will be used to search out mines in beachheads*



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*Dr Carson Eoyang becomes chancellor of the
National Intelligence University*



PRESIDENT'S MESSAGE



*Rear Adm. Richard H. Wells
and Provost Richard Elster.*

It has been a privilege to serve as the President of the Naval Postgraduate School. It is amazing to see the exceptional contributions to national security provided by our outstanding faculty, staff and students and witness the dynamic changes of our student population as it becomes more joint and international. Today's NPS includes resident students from all U.S. services, homeland security and intelligence agencies and more than 50 nations. And that is just the tip, we have more than 800 distance education students reach hundreds more with our outreach programs.

These bright students continue to develop critical new skills for future military and government service and their thesis research provides an important return-on-investment for warfighters and the nation. They have made significant contributions in areas such as tactical "mesh" networks, collaborative technologies, maritime security, counterinsurgency operations, and antiterrorism and force protection.

NPS continually adapts its warfare-oriented interdisciplinary programs from C4I to undersea warfare to meet emerging military requirements; introduces new curricula for Special Operations Command and other combatant commanders; pioneers advanced education in homeland security; and adds to a vibrant distributed learning program that delivers technical education to warfighters in the field and engineers in our Navy and defense labs.

I am proud to say that our programs have produced new technologies and defense capabilities, saved lives, and saved money. This publication offers a glimpse at some of the recent achievements but it only skims the surface. I invite you to come to our campus to see for yourself the innovations taking place at the Naval Postgraduate School.

- Rear Adm. Richard H. Wells
NPS President
December 2005 - July 2006

IN REVIEW

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U.S. Navy photo



U.S. Navy photo

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EOYANG LEADS NATIONAL INTELLIGENCE UNIVERSITY

By John Sanders

Director of National Intelligence John Negroponte selected Dr. Carson Eoyang as the chancellor of the National Intelligence University (NIU), which was established last year based upon recommendations of the president's Commission on the Intelligence Capabilities of the United States Regarding Weapons of Mass Destruction.

Eoyang joined the Naval Postgraduate School faculty in 1973. His NPS positions include: associate provost for executive education, associate provost for academic affairs and professor of management.

Co-editor of the 1994 book *Citizen Espionage: Studies in Trust and Betrayal*, Eoyang has been a pioneer in intelligence and management research and practice.

He served in the White House Office of Science and Technology Policy from 1999-2000 and was the chief training officer for the Federal Aviation Administration from 1996 to 1999, where he had agency responsibility for all training policies for an organization of 48,000 employees.



Dr. Carson Eoyang now serves as one of the nations leading intelligence professionals.

From 1989 to 1996 Eoyang was the director of training for NASA and, in 1993, he was selected as a team leader on Vice President Gore's National Performance Review.

From 1986-89 he was the director of the Defense Personnel Security Research & Education Center in Monterey.

He has a dual role under Negroponte as the assistant deputy director of national intelligence for education and training and NIU chancellor, and will be responsible for developing an intelligence professional education and development program for the nation's 16 intelligence agencies.

Eoyang earned a bachelor's degree in physics from MIT, an MBA from Harvard Business School, and a doctorate in business from Stanford University. 📖

NSA PROFESSOR NAMED 2006 CARNEGIE SCHOLAR

By Barbara Honegger



Prof. Vali Nasr is known for his research on strategic middle in Islamic societies.

National Security Affairs Prof. Vali Nasr, an expert on the culture and politics of the Middle East and South Asia, was named a Carnegie Scholar for 2006.

The prestigious award includes a \$100,000 grant, which can be used as the recipient wishes over a two-year period.

The goal of the Carnegie Scholarships is to expand the range of knowledge and understanding of Islamic

societies and cultures within the United States, and to stimulate research and original scholarship to guide the development of national and foreign policy. In a constructive response to Sept. 11, all 2006 recipients will study issues related to Islam and are the second consecutive group to focus solely on the Muslim world.

Nasr's research topic under the grant will be "Gauging the Prospects for the Rise of 'Muslim Democratic' Political Parties and Platforms in Muslim Democracies."

"I will be addressing the related questions, what will be the shape of democracy in the Muslim world, and who will be the most likely spokespersons of Islam in the political process?" Nasr said. He plans to analyze case studies from Bangladesh, Indonesia, Malaysia, Pakistan and Turkey with supportive data from Egypt, Iran and Morocco as the basis for articles and a new book on the prospects for democratization in the broader Muslim world.

Nasr is known for his research on the "strategic middle" in Islamic societies, a trend of converging secular political agendas and pragmatic Islamic concerns he believes will dominate future Muslim societies. His latest book, *The Shia Revival: How Conflicts within Islam Will Shape the Future*, focuses on the "Shia Crescent" and how it is gaining strength in the wake of the fall of Sunni dictator Saddam Hussein.

The expertise of the new class of Carnegie Scholars ranges from Islamic studies, law, religion, history, sociology, gender studies, international relations, politics, anthropology, constitutionalism, human rights, and comparative literature. 📖

EXPERT CALLS FOR SEPARATE SERVICE FOR UNCONVENTIONAL WARFARE

By Barbara Honegger

In a new book published by Naval Institute Press, Defense Analysis Prof. Hy Rothstein calls for the creation of a separate U.S. military service for unconventional warfare.

The Army Special Operations veteran wrote *Afghanistan and the Troubled Future of Unconventional Warfare* as a wake up call for the Department of Defense. Using what he calls the predictable but counterproductive effects of special operations in Afghanistan as a case study, Rothstein argues that nothing less than a fundamental paradigm shift in DOD structure and culture is needed to win the War on Terrorism.

Rothstein shows that while the initial campaign against the then conventional Taliban using special forces to identify targets and call in air strikes was successful, the U.S. military snatched defeat from the jaws of victory with an increasingly conventional response towards an enemy that became more and more unconventional. The pattern, he argues, is being repeated with devastating consequences in Iraq.

“A new military service dedicated solely to unconventional warfare is necessary for winning the War on Terrorism,” he said. “We need to go back to the original conception of unconventional warfare, rather than rely on attrition warfare.

“Securing and stabilizing civilian populations in areas where we’re engaged against irregular enemies is key to winning the War on Terrorism,” Rothstein stressed, “but it’s hard to stabilize an area if your focus is to find, capture or kill terrorists.”

Rothstein, in fact, proposes resurrecting the model of the World War II Office of Strategic Services (OSS) as the template for the new U.S. military service. The OSS specialized in unconventional warfare, including psychological operations, organizing and supporting resistance movements, and supporting friendly governments fighting insurgencies. He proposes calling the new military service the Department of Strategic Services (DSS).

According to the author, changes in education and culture are key to achieving the needed paradigm shift.



Cmdr. Kim Evans stops to take a photo with children from the Ghoryan District. Evans is the first female commanding officer of a Provincial Reconstruction Team in Afghanistan. U.S. Navy photo.

Rothstein earned a B.S. degree in general engineering from the United States Military Academy, an M.A. in military art and science from the U.S. Army Command and General Staff College, and an M.A. in law and diplomacy as well as a Ph.D. in international relations from the Fletcher School at Tufts University. He retired in 1999 after 30 years of service as a special forces officer.

The Department of Defense Analysis, where Rothstein is senior lecturer, is an interdisciplinary department of faculty representing a wide range of academic and operational specialties. It provides focused courses of instruction in the dynamics of irregular warfare, sub-state conflict, terrorism, information operations and other high-leverage operations in U.S. defense and foreign policy. The department’s special operations curriculum is sponsored by the U.S. Special Operations Command. Its information operations curriculum is sponsored by U.S. Strategic Command. 

IN PRINT

Writing is at the heart of scholarly work and books and major book chapters by NPS faculty contribute significantly to an important body of knowledge on military affairs and national security policy. Recent notable faculty publications include:

Critical Infrastructure Protection in Homeland Security: Defending a Networked Nation by Ted G. Lewis, CHDS

Harnessing Knowledge Dynamics: Principled Organizational Knowing & Learning by Mark Nissen, GSOIS

Making Great Decisions in Business and Life by David R. Henderson, GSBPP (with Charles L. Hooper)

Remote Sensing from Air and Space by R.C. Olsen, GSEAS

The Reagan Imprint: Ideas in American Foreign Policy from the Collapse of Communism to the War on Terror by John Arquilla, GSOIS

The Shia Revival: How Conflicts within Islam Will Shape the Future by Vali Nasr, SIGS

Who Guards the Guardians and How: Democratic Civil-Military Relations edited by Tom Bruneau, SIGS (with Scott D. Tollefson)

PHYSICS TEAM DEVELOPS ANTI-FRATRICIDE BREAKTHROUGH

By Barbara Honegger

It's sometimes called fratricide, and sometimes friendly fire. But whatever you call it, there will hopefully soon be fewer of these battlefield tragedies at night thanks to a revolutionary new Individual Identify Friend or Foe (IIFF) smart patch developed by physics Prof. Nancy Haegel and her dedicated team of officer students.

The inexpensive, lightweight, waterproof patch -- about the size of a large business card -- is designed to be worn by ground troops and flashes a brilliant inverted 'V' in the night vision goggles of friendly forces when swept by infrared (IR) targeting/aiming lasers. The device is designed primarily for individual shooter identification as a final signal when other safeguards have failed.

"The smart response of the IIFF patch and a signal directly visible to the shooter are significant improvements in both visibility and operational security over existing patches and glint tape that simply reflect light," said Haegel. "The new system works up to 350 meters, which covers most instances of night operation individual fratricide, and integrates seamlessly into existing standard operating procedures. It's a great example of the strength of what we can do here at the Naval Postgraduate School, with the combination of faculty expertise and students with operational experience."

"The driving force (behind the anti-fratricide prototype development) was former NPS student and Navy SEAL, Lt. Cmdr. Frank Bradley, who had a great deal of operational experience and close friends who were injured by friendly fire," said Marine Corps Capt. Sean Patrick Riley, one of two students



IFF patch viewed with goggles.

"A 90 percent solution today is better than a 100 percent solution ten years from now."

- Nancy Haegel, Physicist

currently working on the project. "Lt. Cmdr. Bradley and I knew each other, and he knew I was interested in working on something that would positively impact our operational forces. When I came to NPS I helped him test the initial design, and I've taken on the next generation prototype as part of my own research."

"The IIFF project was Bradley's baby," agreed Marine Corps Capt. Patrick Shaun Williams, the other student currently

working on IIFF. "Lt. Cmdr. Bradley designed the original application, which was a wearable IR light-emitting American flag (patch), as a side project to his main thesis."

"The need for better and more operationally secure Individual Identify Friend or Foe devices has become critical

with the proliferation of night vision devices in the hands of hostile forces and our own ground troops, Marines and special operations teams, as well as the increase in urban warfare," said Williams, whose thesis research involves adapting individual IFF to mitigating low-altitude vehicle convoy fratricide from helicopter gunfire. "My goal is to develop a vehicle convoy IIFF technology that operates up to 4,000 meters and at up to a four kilometer slant range."

Haegel also stressed the urgency of success. "A 90 percent solution today is better than a 100 percent solution ten years from now," she said.

From the outset of the anti-fratricide project, Haegel's team has collaborated with Add Vision, Inc. of Scotts Valley, Calif., the manufacturer of the light-emitting polymer that is at the heart of the device.

"Add Vision screen prints the special light emitting polymers onto a flexible substrate, like screen printing onto fabric," said Haegel. "That's what allows the patches to be so cost effective, at an estimated 20 dollars apiece. And the low cost, in turn, means we can afford to have multiple patches for each night operator, allowing 360-degree exposure to the interrogating beam."

The second generation 'V' patch with coin cell batteries was successfully field tested at ranges up to 350 meters in February and April, and additional tests have been conducted at Camp Roberts. A third generation prototype with replaceable batteries will be available soon. At that point, Haegel hopes to transfer the testing and 20 prototypes to the program's sponsor, the Marine Corps Warfighting Laboratory (MCWL). The program officer at MCWL is Maj. Jeffrey Dunn.

"People often try to differentiate between the research and teaching we do," said Haegel. "This project is a great example of teaching and research. Everyone brings their expertise -- the officers, the faculty, our collaborators -- and we teach each other and develop something new to meet a read need in the field." 



Marine Corps Capt. Patrick Shaun Williams, right, views a prototype Individual Identify Friend or Foe (IIFF) smart patch held by Marine Corps Capt. Sean Patrick Riley.

ASTRONAUTICS PROFESSOR WALKS SOFTLY, CARRIES A BIG LASER

By Barbara Honegger

Few would suspect the unassuming professor shuffling between laser labs at NPS is about to change the world as well as Space. But that's exactly what Distinguished Prof. of Mechanical and Astronautical Engineering Brig Agrawal is quietly, but quickly, doing.

As director of the Spacecraft Research and Design Center, Agrawal oversees the ground-breaking Bifocal Relay Mirror Spacecraft Laboratory, developing the software and technology needed to receive and re-target laser beams anywhere on Earth. A joint project of NPS and the Air Force Research Laboratory (AFRL), the lab uses three-axis satellite simulators to replicate the spacecraft's motion and the action of its two optically-coupled space telescopes. The goal is a constellation of 27 twin-mirror satellites orbiting at 715 kilometers able to receive and transmit beams from ground-based, aircraft-borne and other space-based lasers for non-weapon force enhancement missions.

"This research is unique," said Agrawal. "No other test bed in the country demonstrates integrated spacecraft control and advanced optical technology, and it owes its existence to NPS officer students. The preliminary design was done by students in my Spacecraft Design II course in the Summer of 2000; the same year our joint NPS-AFRL team won the National Reconnaissance Office (NRO) Director's Innovative Initiative Award, which included a \$340,000 grant to further develop the technology; and the laboratory was dedicated just two years later, in June 2002."

"Through an evolution of increasingly sophisticated satellite test beds, our NPS students are validating advanced attitude control and fine pointing techniques in the micro-radians range (1 micro-radian = 0.00006 degrees) for the Bifocal Relay Mirror Spacecraft," Agrawal said. "Our first Three-Axis Satellite Simulator test bed had no moving target, only a rudimentary optical payload, and its actuators were insufficient to rotate the spacecraft. So in late 2004 we took delivery of an advanced test bed, the Three-Axis Satellite Simulator



Masters student Coast Guard Lt. Cmdr. Scott Johnson controls a bifocal relay mirror satellite simulator.

2, consisting of three modules -- a spherical air bearing, a spacecraft bus, and a sophisticated optical payload. The lab now also has a laser jitter control test bed with the goal of jitter control in the nano-radians range (1 nano-radian = 0.00000006 degrees). And it has a test bed to compensate for atmospheric turbulence using a wave-front sensor and a deformable mirror that can change shape to compensate for detected beam error. Both the fine pointing and jitter control technologies are also applicable to imaging satellites and space laser communications."

In addition to attracting funding -- \$3.5 million over five years from the Air Force, Missile Defense Agency, and NRO -- a further measure of Agrawal's stellar reputation is the high caliber of students he attracts. A prime example is Astronautical Engineering Ph.D. student Air Force Maj. Timothy Sands, a B-52 electronic warfare officer who taught the bomber crew force and flew the first strike into Iraq in Operation Iraqi Freedom. Also a rocket propulsion engineer and international space mission planner, Sands flew hundreds of combat hours in Operation Enduring Freedom in Afghanistan and Operation Allied Force in Kosovo-Serbia as well.

"My passion is to some day be able to jam radars from satellites 100 miles up, versus the best we're able to do today, from aircraft at altitudes of around eight miles," Sands said. "I came to NPS having already studied astronautical engineering. In a certificate program in astronautical engineering at U.C.L.A., I was introduced spacecraft control movement gyroscopes for rapid maneuvering during time-critical missions. In a master of engineering program in space operations from the University of Colorado, I focused on satellites jamming SAM missiles. In my master's program in space studies from the University of North Dakota, I studied the Space Shuttle Radar Topographic Mapper Mission. This is when I had the "Ah ha!" experience where I realized we could use radar emitters already in space for remote sensing and earth mapping missions to jam fixed enemy radar trying to target our planes," Sands recalled. "So I arrived at NPS with this history and this mission, already knowing what was needed to achieve the goal -- a satellite with rapid, agile control and tight pointing capability. Professor Agrawal and NPS are widely known as the place to master just these skills."

"I've learned more in my two and a half years here than in all the time before, and

I'm finally at a place where I can apply what I know to make my dream a reality. Jammers use radar instead of lasers, but



Astronautical Engineering Ph.D. student, Air Force Maj. Timothy Sands, uses the Three-Axis Satellite Simulator 2 to study future space-based radar jammers.

radar is not as dispersed by the atmosphere. So the problem I'm solving for my Ph.D. thesis is actually much harder than the one I eventually came here to solve."

"If there's anything you need, Professor Agrawal can make it happen," said Sands. "He brings so many crown jewels to NPS because he can make it all happen. And through it all, he's always mindful that his number one goal is to produce educated officers – to develop the new tools that, in the end, make me and the other students as prepared and as smart as possible."

"What really attracted me to NPS was Professor Agrawal and his reputation," agreed Coast Guard Lt. Cmdr. Scott Johnson, a mechanical engineering master's student also doing his thesis research in the Bifocal Relay Mirror Spacecraft Laboratory. Johnson's thesis is on beam control, developing the system that stabilizes the laser from the source onto the satellite test bed. "In mechanical engineering you have to choose a specialty

track, and I chose controlling mechanical systems because of the great things I'd heard about Professor Agrawal," he said. Before coming to NPS, Johnson served 12 years in Coast Guard marine safety, specializing in maritime accident investigations and commercial ship inspections.

In addition to Sands and Johnson, Agrawal currently advises doctoral student Air Force captain Dan Burtz, who is doing his thesis on adaptive optics, using the deformable mirror test bed, and four masters students in the Spacecraft Research and Design Center group. Since its founding in 1998, the Center has graduated four Ph.D. and 30 masters students in astronautical engineering from all of the military services.

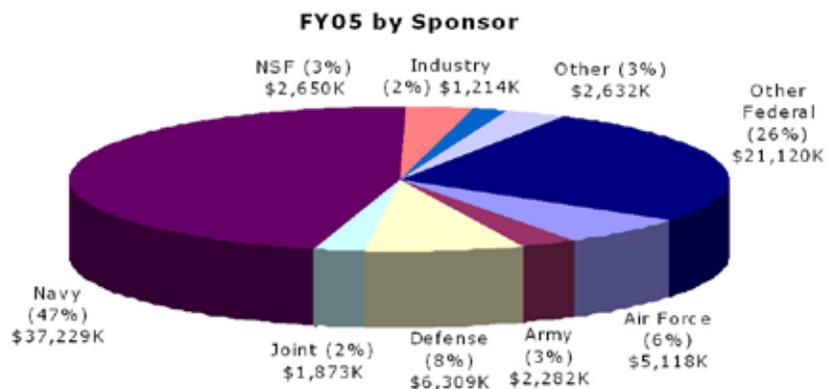
In addition to the NPS-AFRL Bifocal Relay Mirror Spacecraft Laboratory, the Center has five state-of-the-art laboratories used for instruction and research in space systems engineering and space operations: The Spacecraft Design Laboratory; the Spacecraft Attitude Dynamics and Control Laboratory; the Smart Structure Laboratory; the Satellite Service Laboratory; and the FLTSAT-COM Laboratory, with a qualification

model of the Navy communications satellite. The laboratories have been used in joint projects with the Naval Satellite Operational Center, the Naval Research Laboratory, the Air Force Research Laboratory, Columbia University, and Boeing Corporation.

Before coming to NPS, Agrawal worked for two decades at Communications Satellite Corporation and International Telecommunications Satellite Corporation (INTELSAT). He wrote the first textbook on spacecraft design, is the author of over 70 published technical papers, and holds a patent on an attitude pointing error correction system for geosynchronous satellites. Agrawal earned a Ph.D. in mechanical engineering from Syracuse University and master's degrees in mechanical engineering from MacMaster University and Roorkee University. He is an Associate Fellow of the American Institute of Aeronautical and Astronautical Engineering (AIAA), and is the recipient of the NPS Outstanding Faculty Research Award, the NPS Outstanding Teacher Award, an AIAA Space System Design Award, and INTELSAT's Award for Inventiveness and Technological Contribution.

RESEARCH FACTS

Research at NPS is an integral part of graduate education, advancing national security and challenging students with creative problem solving experiences on relevant issues. In FY05, NPS had available over \$111 million in sponsored program funding. Total expenditures exceeded \$80 million.



WWW.NPS.EDU/RESEARCH

WHITCOMB RECEIVES PRESTIGIOUS NAVAL ENGINEERING AWARD

By **Barbara Honegger**

Associate Professor of Systems Engineering Cliff Whitcomb has won the American Society of Naval Engineers (ASNE) Jimmie Hamilton Award for the best original technical paper published in the association's journal in 2005. The winning article, "A Military Effectiveness Analysis and Decision Making Framework for Naval Ship Design and Acquisition," was co-authored with Mr. John Hootman and appeared in the summer 2005 issue of *Naval Engineers Journal*.

Since 1967, the ASNE Journal Committee has chosen one paper each year based on professionalism, depth of treatment, importance and lasting value of the subject matter, clarity of composition and style, and individual effort.

The award, presented by Mr. John Leadmon, director of Submarine and Submersible Design at the Naval Sea Systems Command, at a ceremony June 19 in Washington, D.C., reads: "The authors have developed a new framework for performing military effectiveness analysis and design tradeoff decisions... Their methodology represents a profound improvement over traditional, ad hoc tradeoff methodologies, providing a continuous, interactive design space examination tool that can be used by decision makers in real time to simultaneously explore the impact of requirements, product design variables, and emerging technologies during concept formulation and development. The authors are highly deserving of the Society's 2005 Jimmie Hamilton Award."

"I immediately saw the value (of the article)," Leadmon told the audience at ASNE's annual conference. "As recently as three weeks ago, I emphasized to our submarine design community the importance of adopting these methods to make the most of our limited time and money. I encourage the extended Navy ship design community to see and understand the necessity of heading in the direction described in this paper."

"This award brings great credit on both the Naval Postgraduate School and Prof.

Whitcomb and is an outstanding testimonial to the scholarly value of his work," said Prof. Dave Olwell, Chairman of the NPS Systems Engineering Department.



"Since coming to NPS in the summer of 2005, Prof. Whitcomb has taken the lead on NPS' Systems Engineering Certificate program for active duty Navy engineering duty officers, developing and teaching three of its four courses, and advised the June 2006 Systems Engineering and Analysis (SEA) 9 interdisciplinary Ship Anti-Ballistic Response (SABR) student team," said Olwell.

"This award brings great credit on both the Naval Postgraduate School and Prof. Whitcomb and is an outstanding testimonial to the scholarly value of his work."

**- Dave Olwell, Chairman,
Systems Engineering**

"This is the first quantitative analysis decision aide for Naval combatant systems, being applied to the development of an actual major surface combatant ship," said Whitcomb. "The methods I've been recognized for are being applied to the actual alternatives assessment for the Maritime Air and Missile Defense of Joint

Forces (MAMDJF) that will be used to select the future capabilities of the Navy's next surface combatant ship, after DDX. I'm a team member on that project. As the SABR team student adviser, I was able to ensure our students implemented an analysis process that would be useful if applied to the actual MAMDJF project. In fact, I'll be showing the project's executive brief to the MAMDJF team run by the Naval Sea Systems Command and Center for Naval Analyses."

Whitcomb received his doctoral degree in mechanical engineering in 1988 from the University of Maryland, College Park, and both an SM degree in electrical engineering and computer science and a naval engineer degree from the Massachusetts Institute of Technology in 1992. He earned a BSE degree in nuclear engineering from the University of Washington in 1984.

Whitcomb served for 23 years as a submarine warfare naval engineering duty officer in the U.S. Navy. He was communications officer and test operations officer aboard the USS Scamp (SSN-588); a ship design research engineer for the Naval Surface Warfare Center, Carderock Division; and program officer at the Office of Naval Research, Ship Structures and Systems Science and Technology Division. In 1998, he became associate professor of naval construction and engineering at MIT, and then director of the MIT-UTC systems engineering program. From 2003 to 2005, Whitcomb was eminent scientist at the Naval Sea Systems Command, Naval Surface Warfare Center, as well as professor of naval architecture and marine engineering, professor of engineering management, and Northrop Grumman Ship Systems Endowed Chair in Shipbuilding and Engineering at the University of New Orleans, before coming to NPS.

Hootman, with whom Whitcomb shares the honor, is ship concept manager in the Future Ship and Force Architecture Concepts Division of the Naval Sea Systems Command.

The research outlined in Whitcomb and Hootman's article was funded by the Office of Naval Research. 

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Military Sensing Symposia – Infrared Countermeasures Conference

7th International Symposium on Technology and the Mine Problem

NPS HOSTS 7TH INTERNATIONAL SYMPOSIUM ON TECHNOLOGY AND THE MINE PROBLEM

By **Barbara Honegger**

The 7th International Symposium on Technology and the Mine Problem attracted the nation's top military and civilian experts in mine warfare, improvised explosive devices and port security to NPS May 2-4. Leading the program were U.S.

also served as deputy director Expeditionary Warfare, Office of the Chief of Naval Operations, and director, Warfare Systems Architecture and Engineering, Space and Naval Warfare Systems Command. "The main goal is to see that the real priorities are articulated to our defense contractor



Rear Adm. John J. Waickwicz, Commander, Fleet Anti-Submarine Warfare Command; NPS Chief of Staff, Air Force Col. David A. Smarsh; and Vice Adm. Barry M. Costello, Commander, Third Fleet, at the 7th International Symposium on Technology and the Mine Problem.

Marine Corps Lt. Gen. James N. Mattis, commanding general of the Marine Corps Combat Development Command, and Vice Adm. Barry M. Costello, commander Third Fleet (C3F).

Retired Rear Adm. Richard D. Williams, the new NPS faculty chair for Mine Warfare and an alumnus (Physics, 1972), kicked off the symposium. As program executive officer, Mine Warfare in the mid 1990s, Williams commissioned the school's mine warfare chair and co-sponsored the first symposium in the series.

"The four issues covered by this conference -- sea mines, land mines, and for the first time port security and improvised explosive devices -- are four of the most important challenges facing the Department of Defense," said Williams, who

and research and academic partners by the leaders in the Department of Defense, so the technologies they develop target true operational needs. Our plenary speakers set the table for the most valuable product of the symposium -- the unencumbered exchange of thought and experiences among scientists, researchers, and academicians."

"It's a measure of the growing importance of mine countermeasures that this symposium attracted military leaders of the caliber of Lieutenant General Mattis, who commanded Task Force 58 in Afghanistan and led the charge from the Gulf to Baghdad as commanding general of the First Marine Division, and Vice Admiral Costello, who as commander Third Fleet is leading the transformation of the Navy," said Al Bottoms, the first NPS faculty chair for Mine Warfare and originator of the symposium series.

Mattis, the keynote speaker, stressed the importance of fully engaging the civilian defense community in solving the mine/IED problem. Williams introduced him as “one of the top warrior scholars in the U.S. and the best possible person to set the stage from the warrior perspective.”

“We’re in the middle of a war and we need your help,” Mattis told the audience of experts from the civilian defense sector, research laboratories and academe. “I have served in the Middle East area of operations since 1979 and I can tell you, we need a better and more integrated effort to solve this problem and only a holistic approach will succeed. We need to reinforce the military with the best possible technology and use everything in our toolbox -- technology, tactics and techniques, intelligence and surveillance. If we can go to the Moon in ten years, we can solve this problem, and with your help, we will.”

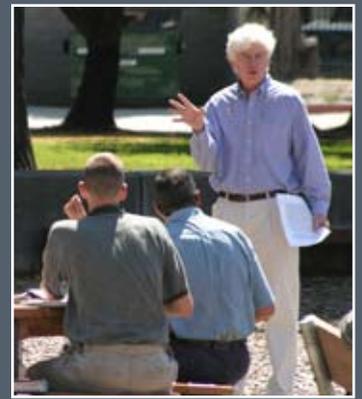
Costello, whose responsibilities as C3F include West Coast port security, reemphasized Mattis’ main message. “We appreciate what you (the defense contractor and research communities) bring to the table. We recognize we don’t have all the solutions, and we need you,” he said.

“The most important advance in decades in (sea) mine countermeasures is about to come online, the introduction to the fleet of the Littoral Combat Ship (LCS), which integrates countermine and ASW warfare for a seamless focus across the underwater battlespace,” Costello stressed. “With LCS, we will have organic mine warfare modules. We’re also creating an Undersea Warfare Center for Excellence in San Diego and relocating the Mine Warfare Command, also to San Diego; consolidating the mine warfare and anti-submarine warfare training commands; and aligning mine warfare support with lead type commands.”

The symposium was sponsored by the Deputy Director for Expeditionary Warfare, Office of the Chief of Naval Operations; the Program Executive Officer, Mine Warfare; the Office of Naval Research; and NPS. The principal investigator for the symposium was professor Clyde Scandrette, chairman of the NPS Department of Mathematics. 

NPS FACULTY OVERVIEW

Naval Postgraduate School faculty teach on campus, in the fleet and around the world through a mix of residential degree programs, distributed learning, executive courses and mobile education teams.



This world-class faculty consists of 562 members, including 238 tenured/tenure track and 43 military officers from all services. Nearly all hold a doctorate.

Sources of faculty doctorates include:

- Stanford University
- University of California at Berkeley
- University of California at Los Angeles
- Massachusetts Institute of Technology
- Harvard University
- Yale University
- Pennsylvania State University

FACULTY AWARDS

Rear Admiral John Jay Schieffelin Award for Excellence in Teaching

Lecturer George Lober, Department of Defense Analysis was chosen through wide consensus ascertained through a ballot polling of students and graduates.



Military Officers Association Joint Service Warfare Award

Vice Adm. Norbert R. Ryan, Jr., (Ret), the President of the Military Officers Association of America (center), speaks with Cmdr. Tim Hobbs (left) and Capt. Starr King (right), the recipients of the Military Officers Association Joint Service Warfare Award, which Vice Adm. Ryan presented to them at the NPS Spring Quarter Graduation Awards Ceremony, Tuesday, June 6th. The award is presented to NPS military faculty members who have contributed most significantly to the study, implementation and spirit of joint-service warfare. Both recipients received a life membership in the Military Officers Association of America and a check for \$500.

SYSTEMS ENGINEERING TEAM DESIGNS “9/11 FROM THE SEA” DEFENSE

By Barbara Honegger

A team of seven Systems Engineering and Analysis (SEA) students presented an all-day brief and demonstrations on their Maritime Threat Response (MTR) Capstone Project, May 24. The mission of the integrated interdisciplinary research group was to define and select a cost-effective “system of systems” architecture to respond to near-term maritime terrorist threats in and from San Francisco Bay. The three threats the system was designed to defend against were a weapon of mass destruction (WMD) smuggled onto an innocent ship, a “9/11 from the sea” of hijacked ships used as weapons and an attack by a small boat within the Bay.

“This capstone project was a response to a national mission requirement in a report for the Office of the Assistant Secretary of Defense for Homeland Defense,” said Prof. Frank Shoup, director of the Wayne E. Meyer Institute for Systems Engineering, the project sponsor. “It responds to a series of requirements outlined in the National Strategy for Maritime Security.”

“The question was, can you build a cost-effective force from existing commercial off-the-shelf technologies and use it selectively in an interagency CONOPS (concept of operations) to meet the mission of protecting the U.S. from terrorist attacks from the maritime domain?” said student project leader Lt. Cmdr. Andrew Kessler, an F/A-18 pilot.

“For all three threat scenarios, the answer -- including recommendations for future improvements -- was yes,” Kessler said. “I’ve learned a huge amount over the last six months that I’ll be able to directly apply, as I’ll be working in systems engineering and program management at the NAVAIR Systems Command.”

“This experience is extremely valuable because you take a system of systems approach to analyzing and solving problems of im-

mediate relevance to the nation and the fleet,” said team member Lt. Joe Oravec, whose previous tour included homeland defense missions aboard a Navy patrol coastal ship and who briefed on countering the small boat attack. “Almost all of us (in the project) are unrestricted line officers. When we come to NPS, we get to take a step back and see the bigger picture, and there’s no better way to do that than participating in an interdisciplinary SEA project.”

“This experience has been tremendously valuable,” agreed student team systems engineer Jennifer Davis, a former Navy helicopter pilot and now civilian student from Northrup Grumman in the NPS PD-21 program. “The group thesis is fantastic because you’re working as part of a team integrating the efforts of a wide variety of experts. As an aviation engineer working on the DDX, I was transferred to the systems engineering department at Northrup Grumman where they design medium-sized escort ships. Everything I’ve learned and used here I’ll be able

to directly apply to that effort. But above all, it’s been a pleasure and an honor to work with my Naval classmates.” Davis was chief systems engineer for the team.

“Most important for me was being part of a national focus mission, and the nuclear physics I didn’t expect to learn,” said Lt. Brian Connett, an insertion and extraction expert with Special Boat Team 20 who briefed on the counter-WMD mission. “I came in knowing nothing on the subject and got to sit in on labs and discussions at Lawrence Livermore National Laboratory. Through this capstone project, I’ve learned I can go into any field and ask the appropriate questions to get the information I need to achieve the mission.” After NPS, Connett will report to the Naval Information Operations Center in Hawaii.

In addition to Kessler, Oravec, Davis and Connett, Marine Corps Maj. Michael Shewfelt briefed on countering ships as weapons. Ens. Shaunnah Wark briefed on the alternative Maritime Threat



Left to right: Systems Engineering and Analysis Maritime Threat Response Capstone Project team members Ens. Shaunnah Wark, student team leader Lt. Cmdr. Andrew Kessler; Lt. Joe Oravec, and Lt. Brian Connell review the systems diagram of a Coast Guard medium endurance cutter following a full day of briefs and demonstrations.

Response system of systems architectures reviewed by the team and Lt. Jared Chiourouman briefed on the system of systems sustain functions, including ship fuel consumption, watch team sleep analysis and small boat and helicopter availability and reliability.

The Maritime Threat Response team found that interagency cooperation and coordination is critical to mission success; that specific intelligence is a necessary, but not sufficient, component of a reliable and effective response to terrorist threats; that minimizing the disruption of maritime commerce requires nontraditional solutions and CONOPS; and that CONOPS and rules of engagement need to permit and enable rapid, independent action by forces without having to consult headquarters.

The group's recommendations include the formation of a Standing Joint Interagency Task Force for Counterterrorism and Homeland Security Operations, and operational testing of sensor technologies against actual radiation devices in realistic operational conditions to improve procurement decisions and the interagency CONOPS.

Also participating were students from the Singapore Temasek Defense Systems Institute: Andy Chew, Terence Ho, Kwang Yong Lim, Ling Siew NG, Eng Choon Yeo, Koh Choon Chung, Anthony Lee, Seng Chuan Lim and Jackson Tean. The faculty adviser for the project was Prof. Tom Huynh. Assisting throughout were Dr. Arden Duggan of Lawrence Livermore National Laboratory (LLNL) and Dr. Craig Smith, LLNL visiting professor at NPS.

The Maritime Threat Response presentation was one of three capstone project briefs. A second study addressed rapid response communications to support deployable joint command and control systems done at the request of the Joint Forces Command. The third was on Ship (Tactical) Anti-Ballistic Response (SABR) capabilities.

"The SABR project is a companion study to 'Surface Ship Capabilities for the 21st Century,' by Admiral Wayne E. Meyer, at the request of the CNO," said Shoup. The NPS Wayne E. Meyer Institute for Systems Engineering is named in honor of Meyer. 🇺🇸

ROBOTICS TECHNOLOGY GAINS TRACTION AT NPS

By Javier Chagoya

Naval Postgraduate School Combat Systems Sciences and Technology student Ensign Tom Dunbar works with an autonomous robot dubbed AGBOT, a six legged tractor that will be used to search out mines in beachheads. Dunbar has modified the robot design as part of his thesis research.

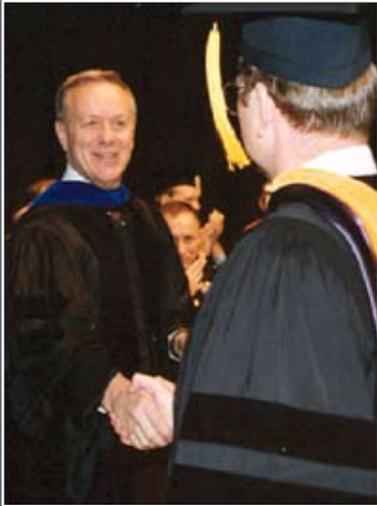
"I've increased rigidity in the chassis, enhanced the steering control mechanism and expanded the distribution in the power bus, minimizing battery consumption," said Dunbar. The price of the enhancements cost about \$1,000, all from commercial off-the-shelf products. Although AGBOT is autonomous, commands or scripts can be sent to it real-time via the Internet. All of the programming is Web driven.



CONGRESSMAN HONORS ELSTER

The following remarks were presented by the Honorable Ike Skelton of Missouri in the House of Representative, Thursday, July 13.

“Mr. Speaker, it has come to my attention that a distinguished career at the Naval Postgraduate School will soon come to an end. Mr. Richard Elster has announced his official retirement after 37 years of service.



Provost Richard Elster congratulates a Ph. D. student.

After receiving his bachelor's degree from the University of Minnesota in 1962, Richard pursued his M.S. in Industrial Relations, and his PhD in Industrial Psychology. By 1967, Richard had finished with school and become a project scientist at Litton Industries.

Dr. Elster became associated with the Naval Postgraduate School in 1969 when he joined the faculty as an assistant professor. During his tenure, he served as an associate professor, professor, Chairman of the Department

of Administrative Sciences, Dean of Instruction, and the Provost and Academic Dean.

Throughout his career at Naval Postgraduate School, Dr. Elster served in several high ranking Pentagon positions. Starting in 1975, he served as special advisor to the Secretary of Defense for manpower and reserve affairs. Dr. Elster also held positions as the Deputy Assistant Secretary of the Navy for Manpower, Acting Assistant Secretary of the Navy for Manpower and Reserve Affairs, and Deputy Assistant Secretary of Defense for Resource Management and Support.

Dr. Elster was recognized for meritorious civilian service as Provost and Academic Dean at the Naval Postgraduate School, from July 1995 to December 2005. Because of his leadership, the Naval Postgraduate School attained unprecedented stature in the defense establishment and the academic community. It was recognized in 2005 with the highest score for military value of all Department of Defense education commands by the Education and Training Joint Cross Service Group.

The Naval Postgraduate School is respected as a world class research university due in part to Dr. Elster's leadership, strategic vision, and devotion to public service. Much of the academic work of the school's students and faculty responds directly to real world defense mission needs.

As Dr. Richard S. Elster prepares for retirement, I know the Members of the House will join me in expressing appreciation for his dedication to the Naval Postgraduate School and will wish him well in all the days ahead.”

CHINA EXPERT SAYS WINDOW FOR PEACEFUL RESOLUTION OF “TAIWAN QUESTION” CLOSING

By Barbara Honegger

Associate Professor of National Security Affairs Lyman Miller, an internationally renowned China expert and former East Asia branch and division chief for the Central Intelligence Agency, presented an information packed lecture on “The Taiwan Question and American Policy Dilemmas,” at NPS, May 31. The talk, sponsored by the NPS Foundation, reviewed the complex history of China-Taiwan relations and evolving U.S. policy on the fraught question of whether to support independence for the island nation.

“The Taiwan Question is the most dangerous issue in U.S.-China relations,” Miller said in opening. “Since 1949, the People's Republic of China (PRC) has insisted that Taiwan is part of China in the face of a growing movement for political independence that portends military conflict. If China, which has 700 to 800 short-range missiles targeted at Taiwan, were to attack, the U.S. would have to decide whether to intervene, and a decision to intervene (on behalf of Taiwan) would invoke an extremely costly war between the U.S. and China.”

With China's recent passage of an anti-secession law making it illegal to declare independence and Taiwan's preparations for a referendum on just that question, Miller warned that the window for a peaceful resolution is closing. “The window is closing with U.S. foreign policy opinion still divided over whether China is a strategic competitor or strategic partner,” he said. “The dilemma for the U.S. is real, a potential choice between two fundamental principles -- popular self-determination and national sovereignty. Taiwan insists it only wants to assert independence from a colonial power, like George Washington, and China says it's only trying to preserve the Union, like Abraham Lincoln.”

Despite the PRC's claims that Taiwan is part of China, Miller showed that Taiwan's historical status is complex and ambiguous. Until the 16th Century the island was not considered part of China, and it was not incorporated into the Qing/Manchu empire until 1683. From 1683 to the mid 18th Century, Qing rulers even banned Chinese immigration to Taiwan.

It was only in the late 18th and 19th Century that Chinese immigration was tolerated, and direct Qing administration of Taiwan didn't begin until 1885. After China's defeat in the Sino-Japanese War in 1895, Taiwan was ceded to Japan, a change which triggered a brief resistance by the Taiwanese and the first declaration of a “Republic of Taiwan.” Japan then ruled Taiwan until its defeat in World War II, governing the island as a colony and declaring its residents “imperial citizens.” The Cairo Conference declaration of 1943 provided for the return to China of all territories lost to Japan since 1895, including Taiwan, and in 1945 the Republic of China asserted sovereignty over the island. After his defeat by Mao Zedong in the Chinese Civil War, Chiang Kai-

shek withdrew his nationalist government and up to two million mainlanders to Taiwan. President Truman ordered the 7th Fleet to the Taiwan Strait at the onset of the Korean War, freezing the Chinese Civil War, with both Beijing and Taipei claiming to be the sole government of a unified China.

United States' China policy changed 180 degrees from 1950, when the Republic of China in Taipei was recognized as "China" and the U.S. government openly committed to defending the island, to Jan. 1, 1979 when President Carter officially recognized Beijing, derecognized Taipei, and declared America's interest in a "peaceful resolution" of the Taiwan Question. The People's Republic of China had already won the zero-sum competition for international recognition in 1971, with PRC entry into the United Nations. The 1979 Taiwan Relations Act established a formal mechanism for unofficial relations with Taipei and provided for continued arms sales to the island for self defense, but gave no explicit security guarantee. The U.S. again declared its interest in a "peaceful resolution" of the Taiwan Question, followed by China declaring its preference for "peaceful reunification." In the 1980s, the Reagan Administration pursued strategic collaboration and bilateral ties with mainland China, continued unofficial relations with Taipei, and agreed with Beijing to reduce and eventually abolish arms sales to Taiwan. Despite Tiananmen Square, President George H.W. Bush retained ties with Beijing and resisted congressional pressure to revoke China's most favored nation (MFN) trading status. President Clinton leaned more towards Taipei, conditioning the mainland's MFN on human rights and upgrading official contacts with the island. Outraged by Lee Teng-hui's visit to Cornell University in 1995, China suspended talks with Taipei and conducted provocative missile tests and landing exercises, leading President Clinton to send aircraft carriers into the Taiwan Strait. In his second term, Clinton reversed course, restoring high level diplomacy, bilateral visits, and military-to-military ties with the mainland. Clinton also went further than Carter, declaring that the U.S. did not support Taiwanese independence, a Two China solution or Taiwan's entry into the U.N.

Miller emphasized the major shift in U.S.-China policy after Sept. 11. "The incoming George W. Bush Administration labeled China a strategic competitor and announced the U.S. would do whatever it takes to defend Taiwan," Miller said. "But 9/11 changed everything. In the wake of Sept. 11 and the growing concern over North Korea's nuclear capabilities, China was recognized as important in the War on Terrorism. President Bush stopped referring to the People's Republic as a strategic competitor, China was admitted to the World Trade Organization, and three summits were held in Beijing within one year of 9/11."

Although Taipei is evolving toward increased "Taiwanization," its population remains divided over whether the island should be independent or is historically and culturally a part of China. Given this internal tension, a pressing question for the U.S., according to Miller, is whether to continue the current policy of

strategic ambiguity, leaving it unclear whether the U.S. would intervene on behalf of Taiwan, or move to strategic clarity, making explicit the conditions under which the U.S. would and would not come to Taiwan's defense.

Three of Miller's Far East Asia Studies students -- Air Force Capt. Terry Vance, U.S. Marine Corps Maj. Ivan Kanapathy, and Air Force Capt. Tracy Glazer -- presented a summary of their positions on the Taiwan Question following the lecture. Glazer, who will study Mandarin at the Defense Language Insti-



China expert, H. Lyman Miller (left) with NSA Asian Studies students (left to right) Air Force Capt. Terry Vance, U.S. Marine Corps Maj. Ivan Kanapathy and Air Force Capt. Tracy Glazer.

tute after leaving NPS, said the U.S. should stick to its policy of strategic ambiguity "because it has worked, because the stability of China is paramount and because with increasing PRC liberalization Taiwan and China will eventually reunify."

Kanapathy said he believed Taiwan's actions would determine whether the U.S. will intervene. He predicted Taiwan would declare independence and said that if attacked by China, U.S. public opinion would support coming to the defense of the island nation.

Vance, who will also study Mandarin at DLI, disagreed. Like Glazer, he supported the position of mainland China. "This issue is about sovereignty," he said. "Asia has always been a Confucian hierarchy with China at the center. U.S. foreign policy should respect Chinese sovereignty in the region, and it is in our interest to do so. U.S. trade with China is more than five times our trade with Taiwan. The capitalist system has taken root in China, which is increasingly technocratic. Whether a rising China becomes a U.S. competitor or partner depends increasingly on how we decide to label them. We need strategic clarity. We need to explicitly state that we respect Taiwan's right to self determination but (we need to say), if you declare independence, you're on your own." 🇺🇸

285 GRADUATES RECEIVE DIPLOMAS AT SPRING COMMENCEMENT

By **MCCS (AW/SW) Jacqueline Kiel**

In a graduation ceremony filled with the normal pomp and pageantry, a few differences right at the beginning showed that this was no ordinary commencement. Naval Postgraduate School professors were in robes, but the president of the university, the guest speaker and most of the graduating students wore uniforms. Some of the graduates wore battle ribbons from campaigns in Afghanistan and Iraq. Another distinction - most were combat veterans earning master's degrees, with a sprinkling of bachelor's degrees. Two students graduated with Ph.D.s. In all 285 students graduated Friday, June 16.

This was the Spring Quarter Graduation, normally the biggest of the four conducted each year. In the ceremony, President of NPS, Rear Adm. Richard Wells had advice for the graduating students. "You know what's expected of you as leaders," he said. "We expect a lot from you, and you should have expectations of your leaders. You should expect them to not have a zero tolerance attitude. Rather you should expect them to point out your errors, but still allow for creativity and initiative. Both are essential to leadership."

During the ceremony, Wells presented Provost and Academic Dean, Dr. Richard S. Elster, with the Meritorious Civilian Service Award for service from July 1995 through December 2005. During his tenure, among other things, NPS received the highest score for all military value among the other upper level military schools.



Vice Adm. Stanley R. Szemborski was the guest speaker at the Spring Quarter Graduation ceremony.

Guest speaker for the graduation was Vice Adm. Stanley R. Szemborski, principal deputy director of Program Analysis and Evaluation in the Office of the Secretary of Defense. While relaying an important message, Szemborski also kept his speech to the graduates lighthearted. He said for his speech preparation he had asked his wife what he should speak about, and she said: "about five minutes." The remark brought a collective chuckle from the audience.

After thanking Wells for the introduction, he turned to Dr. Jeffrey Knorr, who was seated on the stage, and thanked him, as he had been Szemborski's thesis advisor 34 years ago.

Szemborski, a Naval Academy graduate, earned his master of science in electrical engineering in 1972.

Szemborski commented on how much has changed since his graduation. The computer room at the time was located in what is now the library, and there was as much computing power in the entire space as one personal computer has today.

Szemborski told students the importance of learning tools of the trade, especially as junior officers. "As a mid-grade officer, you must sharpen your leadership skill, and grow in your ability to coordinate the effort of larger organizations," he continued. "My education gave me confidence to take this step. As senior officers, you are expected to be able to direct very large organizations and more importantly to think. You must be able to analyze complex problems through to logical conclusions. It is in this area that I'm most grateful for my advanced education."

"Finally and most importantly, I would like to talk about the importance of family," Szemborski said. In turn he had mothers, fathers and spouses stand and be recognized by the audience. "If you remember nothing else, please remember to make time for your family."



STUDENT AWARDS

Families were in full swing at the ceremony and pride in their graduates was the main emotion displayed by family members.

Gretchen and John Chrisafulli, parents of Army Maj. John R. Chrisafulli were here to see their son receive a master's in defense analysis. "I'm very proud, very emotional and very happy," Gretchen said. Chrisafulli's wife, Anita, and baby daughter, Caleigh, also attended the ceremony.

Capt. Matthew Rosencrans, who has been in the Air Force for five years, received a master's in meteorology. He said, "Finally, I have this big sense of relief."

Rosencrans' parents, Gail and Richard Rosencrans, were at the ceremony. "This was the proudest moment of my life," Gail said. "We're extremely proud," Richard added.

Lt. Cmdr. Aaron C. Young of the Royal Australian Navy graduated with distinction as his parents, wife and young child looked on. He received a master's in physical oceanography. "This has been a great experience overseas," he said. "It's been a great experience meeting people from different countries."

The research was one of the best things about NPS, according to Young. "The quality of the lecturing at NPS is excellent," he added.

His parents, Roberta and John were honored to be able to visit from Perth, Australia. Young and his wife are from Sydney, Australia. His wife, Danielle called the experience here amazing. It's been fabulous," she said. "We have a very strong affinity with Americans." Their daughter Charlotte Grace was born here last October and has dual citizenship.

Lt. Cmdr. Jacqueline Meyer received her master's in business administration. She called her 18 months at NPS satisfying, but said, "It's a relief to be done... finally."

"You have a bright future," said Szemborski at the end of his speech. "Seize it!" 🇺🇸



Lt. Steven R. McKinney, an intelligence officer studying financial management in the Graduate School of Business and Public Policy, received the Bronze Star Medal for his meritorious conduct in the performance of outstanding service to the United States as the report officer and collection manager, Iraq Survey Group, Multi-National Force-Iraq, Baghdad, Iraq, during Operation Iraqi Freedom. Lt. McKinney was the sole detachment member of the highly visible Speicher Team under the Iraq Survey Group. As a strategic debriefer, he personally debriefed former high-ranking Iraqi regime officials, producing intelligence reports leading to clearer determination of strategic intent and activities of former regime members and associated anticoalition groups.

Monterey Council Navy League Award for Highest Academic Achievement – Lt. Warren D. Smith, USN

Presented to a graduating USN, USMC, USCG, or NOAA student who has maintained an outstanding academic record as exhibited by academic achievement, thesis research, motivation and community involvement.

Naval Postgraduate School Outstanding Academic Achievement Award for Department of Defense Student – Maj. Suzanne Streeter, USAF

Presented to a graduating Department of Defense student who has maintained an outstanding academic record as exhibited by academic achievement, thesis research, motivation and community involvement.

Air Force Association Award for Outstanding U.S. Air Force Student – Maj. Suzanne M. Streeter, USAF

Presented to an outstanding U.S. Air Force student. This award is sponsored by the Monterey Chapter of the California Air Force Association and is presented for outstanding service based on community service, leadership, military bearing and academic achievement.

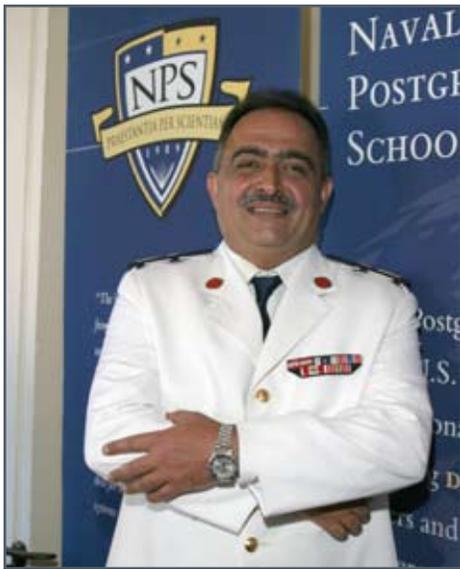
Marine Corps Association Superior Service Award for Outstanding U.S. Marine Student – Capt. Bryan A. Eovito, USMC

Presented to a graduating Marine Corps student in any curriculum for superior service. The award is presented on the basis of superior contributions to the student body, professional community and local Monterey area.



FIRST LEBANESE OFFICER GRADUATES NPS

By MCCS (AW/SW) Jacqueline Kiel



Lt. Col. Hassan A. Hamdar, first Lebanese graduate.

The Naval Postgraduate School boasts a diverse group of national and international students, but even now, after almost one hundred years, firsts are still happening here. The June 19th graduation was the first time a student from Lebanon graduated from the school.

Lt. Col. Hassan A. Hamdar graduated with distinction, earning a Master of Science in Defense Analysis. He also received the Naval Postgraduate School Outstanding Academic Achievement Award for International Students.

Hamdar was pleasantly surprised at receiving the award. "I wasn't expecting this one, though I was expecting something from Defense Analysis," Hamdar said. "I was surprised when I got the email from the Chair of the Department of Defense Analysis, Gordon McCormick, and I was a distinguished graduate for one thing. Secondly, I was nominated for outstanding international Student for Academic Achievement. It was really thrilling for me."

Hamdar is actually in the Lebanese Navy, which is considered part of the Army. "We use the Army ranks," he explained. "I'm a lieutenant colonel, which is equivalent to commander in the U.S. Navy. The Army includes all three of the services, which in the air force, the ground forces

and the navy. That's why we use the same ranks."

A humble man, Hamdar is not one to boast about his accomplishments, which are many. He lets his record speak, but he also questions himself to be sure his actions are the right ones. "Usually I ask the question to myself," he explained. "When I'm doing something, is that what I want? If I'm satisfied with it, I just go with it and that's what I did on all my classes."

I graduated from OCS with distinction. I graduated from the Naval Staff Course with distinction, so my standard became very high and it put on my shoulders a lot of responsibility."

Getting into an international program is not easy according to Hamdar. "The selection is very difficult. It's very tough," he said. "You have many officers who have to take an exam and they have to study a lot and they have to be among the top students in order to be sent overseas to the United States and other countries. So I think you should expect all Lebanese officers to be excellent in different issues or fields."

Hamdar had so many positive things to

"I'm so glad to be a graduate from NPS and I'm grateful to all the people who helped in making this opportunity and for the support and the patient understanding given to me during my stay,"

**- Lt. Col. Hassan A. Hamdar,
Lebanese Navy**

say about NPS. "I talked to the president of NPS and I told him NPS is a place where different cultures meet, and here in NPS, contrary to Samuel P. Huntington's 'The Clash of Civilization and the Remaking of World Order,' where he talks about a future clash between different cultures because of cultural differences, which are

irreconcilable and hard to resolve, you can bring people together," he said emphatically. "They can talk. Here you bring up new perspectives. That's the good thing about NPS. You bring up inside you a new perspective, which you share with different classmates. After you finish, you know how to look at something, how to analyze it, how to deal with it and how to see it in a different view." Hamdar joined the Navy in December 1983 after graduation from Beirut University College, which is now Lebanese American University in Beirut, where he received a degree in computer mathematics. "I joined the Navy as a civilian and I was sent to United States to Officer Candidate School in Newport Rhode Island.

The Naval Postgraduate School was familiar to Hamdar, because many of his countrymen came for short courses in resource management and they enjoyed it a great deal. This made Hamdar want to get to NPS. He finally arrived in December 2004 and after 18 months is now a proud graduate.

While honored to be selected to come to NPS, Hamdar was understandably concerned. "I tell you what, I had three challenges facing me," he said. "First, I'm representing Lebanon for the first and NPS which is a different course from all other naval courses that I have taken. Second, I'm representing the Lebanese Army and finally, I'm representing myself. And all these came together to give me that much of challenge to do something and to be up to that challenge in fulfilling the academic requirements of NPS."

According to Hamdar, NPS has changed him for the better. "I'm now more confident of everything I say, because I've done all the analysis I need," he explained. "Of course it doesn't end here. Now when I want to argue, I know how to put my ideas and discuss it and support without getting offensive in certain areas. I can accept the other's ideas and putting my ideas into the argument. It's the art of persuasion. The skill is how to persuade and how to change and how to accept others as well as you put your own ideas into it."

Perspective is the biggest change Hamdar sees in himself. "It improved the way I



look at things,” he explained. “This is the best way. Change - it needs time, because the mindset, it took me a long time to have this mindset, but to improve it, that’s the better way. And I think NPS is the place where you improve your ideas and you enhance them and you polish them in a way that you present them in a better understanding.”

Hamdar is married and has four children, two daughters, 17 and 15, and two sons, nine and six. The time away from his family was not easy, but Hamdar was able to get them out to California during the summer of 2005. “They stayed with me about three months,” he said. “They enjoyed every moment they spent here in Monterey. We lived in La Mesa and they enjoyed California and every place else.” The family visited several places in California and also went to Las Vegas.

Hamdar’s family has been in the U.S. before, as Hamdar has been to several Navy schools in the States. “I’m a graduate of Naval Staff College also in Newport Rhode Island, so my family went there before and they visited me during the summertime here,” he said.

Like any parent, Hamdar has high expectations for all his children and wants the best for them, but he does expect them to work for it. “They have to achieve the best that they can get from education in order to have a better life,” he said. Equal opportunity for all his children is important to Hamdar. He does not expect anything different from his daughters than he does from his sons. “In Lebanon you will see women are competitive to men. You will see them in different fields, even in the military,” he said. “We have a few of them. They work in administrative and medical areas and not in operational areas.”

While Hamdar’s daughters probably

won’t join the military as they’ve already decided what they want to do, his youngest sons are a different story. “It’s up to them,” he said. “I leave it to the future. I can’t guess right now. They might feel like they like the way I live and they want to follow my steps. I give them guidance more than I dictate what I want them to do. I show them the way and they can choose, because it’s their life, not mine.”

As a father Hamdar knows to limit his expectations of his children. “I try not to put my children in this position, but I have been living all my life challenging myself in any way,” he explained. “Sometimes it’s kind of tense. I want them to excel, I want them to do well. I like them to be among the top, but not the first, because this is very, very, very stressful. It’s very stressing to keep on going that way, because people start looking at you and they expect constant higher achievement. We have a new Lebanese student starting this quarter. My professor said, ‘you set a very high standard for him and he’s going to suffer for this,’” he quoted laughing.

Hamdar had only good things to say about his fellow students saying they were together so much, they had “kind of an understanding.”

“We became familiar with each other, so putting our minds out, just exchanging ideas, saying whatever we felt like saying and this built a trust, and now I feel like I have many friends and I can correspond with them all,” Hamdar said. “It’s nice to have friends all over the world, and NPS made this a possibility.”

Hamdar’s advice for his countrymen who will follow in his footsteps is simple. “I think the best way to express yourself is to speak up your mind,” he said. “At NPS that’s the best thing I learned is to speak up my mind. If I have any idea, I can state

it as long as I can support it academically. It’s not just throwing words and throwing ideas.”

Strength through interaction is a strong belief for Hamdar, and his ideas are expressed in that manner. “Make it good, present it and speak your mind,” he said. “Don’t keep it inside of you. Don’t just question your professor. Talk to fellow students and exchange ideas and views with them. This way you can gain a lot and learn a lot. If you keep everything to yourself, you can’t make any progress at NPS. Other students won’t know you. They will see you in the class, but they won’t know you, and that you have something to prove.”



Navy Lt. Col. Hassan Hamdar presents his service’s plaque as a token of thanks to President Rear Adm. Richard Wells for the support the institution provided.

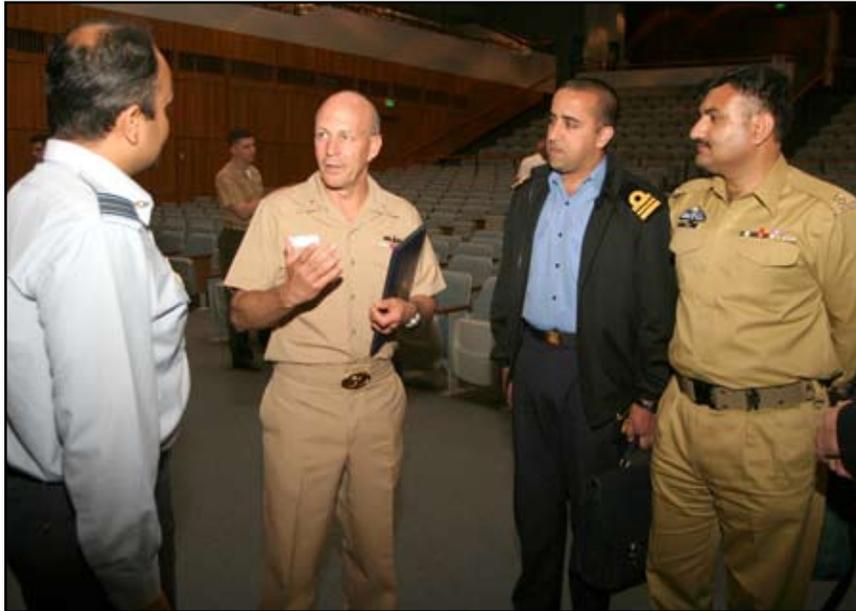
“All I want to say is I’m so glad to be a graduate from NPS and I’m grateful to all the people who helped in making this opportunity and for the support and the patient understanding given to me during my stay,” he said. “Although being by myself for a long period of time, I think the Monterey community and the NPS family just kept me going despite my family being back home. The absence of my family was compensated for by the hospitality, generosity and friendship of all those here.” 🇱🇧

ALUMNUS DETAILS MILITARY'S ROLE IN PAKISTAN DISASTER RELIEF

By MCCS (AW/SW) Jacqueline Kiel

The pictures were stark reminders that all is not well in some areas of the world, but those same pictures also showed that with some military assistance, many bad situations can be greatly improved. One situation in particular is the October 2005 earthquake in Pakistan.

Rear Adm. Michael A. LeFever, Commander, Expeditionary Strike Group One, who was here as the Secretary of the Navy's Guest Lecturer, showed just what the military can accomplish in response to a disaster. He presented his lecture, entitled "The Military's Role in Disaster Relief," to the students, faculty and staff at the Naval Postgraduate School (NPS).



Air Force Wing Commander Waqas Sulehri (left), Lt. Cmdr. Khyber Zaman (second from right) and Army Maj. Abid Shah (right), of the Pakistani military forces, talk to Rear Adm. Michael A. LeFever after he addressed the student body on the U.S. relief mission to Pakistan.

The devastation in a 100 by 300 km area in Pakistan caused by the 7.6 magnitude earthquake was extensive, with more than 73 thousand people dead, more than 128 thousand injured and 3.5 million people displaced, and winter was just around the corner.

Central Command had LeFever in the area within 48 hours as the commander of the Disaster Assistance Center. His idea was to go in, keep the footprint small and assist the Pakistanis, but let them be in charge. "We had the equipment that enabled us to assist them," he said. "In the end, that kind of relationship enabled us to gain that kind of trust. It was about public diplomacy."

Several groups were involved with the relief operation, including medical units, Seabees and various air operation units.

With a great deal of coordination, the 212 Mobile Army Surgical Hospital was on the ground and working within three weeks of the earthquake. Final numbers for the MASH unit alone included more than 400 surgeries, almost 3,500 immunizations about 38 thousand prescriptions and more than 10 thousand lab procedures.

Seabees from Mobile Construction Battalion 4, on deployment in Okinawa, assisted in the relief efforts. Some of them had assisted during the Katrina operations. They built eight schools, giving children a place to go to school, something that would not have

happened had the Seabees not been there, according to LeFever. Approximately 50 shelters were constructed, as well as about a thousand latrines.

To increase efficiency during flight operations, helicopters used sling loads to transport both food and nonfood items. The helicopters would hover and personnel on the ground hooked

the loads underneath the aircraft. The opposite was done at the receiving end. "Sling loads quadrupled efforts," LeFever explained. "Normally it takes 30 to 45 minutes to load and unload aircraft."

Not only was the initial response impressive, but when the operation was over, approximately 30 pieces of heavy equipment were left behind for continued use, another positive factor that pleased the Pakistanis.

LeFever said the operation identified five major points of strategic significance.

Those are the speed and capacity of U.S. humanitarian

operations; adaptive command and control using non standard tactics, techniques and procedures; interagency and international coalition operations; DOD support to public diplomacy; and, risk management in an uncertain environment.

Because of the response by the United States government, 200- to 300-thousand people were saved according to LeFever. "The number of flights and sorties only tells part of it," he said. "The United States was there, and it was an honor to be a part of it."

The change in public opinion in Pakistan in the aftermath of the earthquake and the humanitarian relief operation was impressive. "Before the operation 23 percent of the population approved of the U.S., but after the operation greater than 50 percent approved," LeFever said.

The operation lasted an almost unprecedented nine months. This was the longest humanitarian operation since the Berlin Air Lift, and one of the most successful.

In 1987, LeFever was awarded a master's of science in systems technology (command, control, and communications) from NPS. Of his time here he says, "The two years I spent here were the best in my Navy career." 

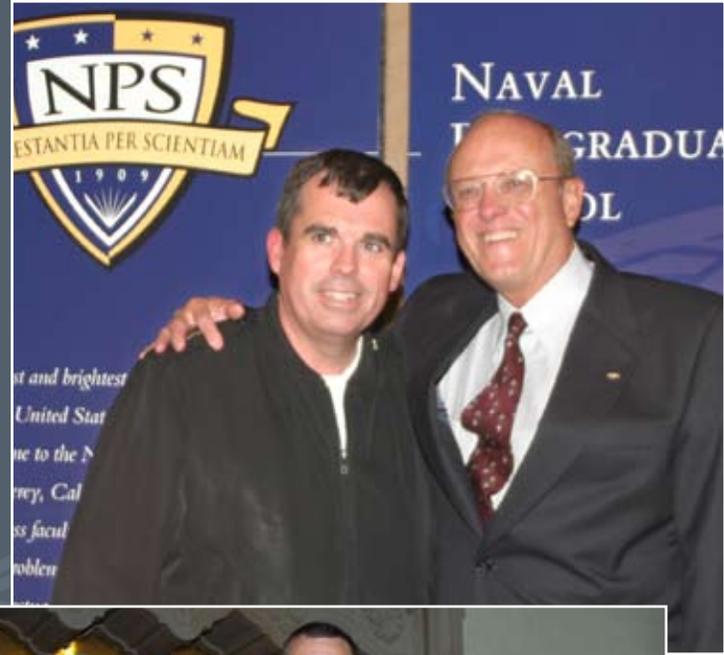
ALUMNI MILESTONES

More than 45,000 military officers from all U.S. services and over 70 nations have earned advanced degrees at NPS.

Many of these alumni are in key leadership positions throughout the armed forces.

Among those who have been recognized recently are:

- Rear Adm. Charles S. Hamilton II and retired Rear Adm. James B. Greene Jr. (upper right).
- Retired Capt. Wayne P. Hughes Jr. and retired Capt. Daniel W. Bursch with Congressman Sam Farr (D-CA) and Jackson Bursch (below).
- Rear Adm. Dan W. Davenport with Dr. Peter Purdue, dean of the Graduate School of Operational and Information Sciences and Prof. Dan Boger, chairman of the Information Sciences Department (lower right).



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