

# IN REVIEW



**Defense Analysis Department  
Dissects Issue of "The Long War"**

## ***Inside this Issue***



*Space Call*



*Fun in the Sun*



*Testing the Waves*



July 2007

## PRESIDENT'S MESSAGE



It has been just over three months since I became President of the Naval Postgraduate School. Although I was aware of the fine reputation of NPS before I took this position, over these past few months I have come more fully to realize that this reputation is based on an impressive and dynamic breadth and quality of education and research programs. It is a privilege to be here and I am honored to be able to represent this superb institution for the next several years.

Since arriving, I have met many of you who work on a daily basis to make this

institution what it is, and I will do more of that. I have also spent some time in meetings with our local and Navy stakeholders and friends. That outreach has also only begun and will continue at an accelerated pace.

An important initiative engaging the campus is one designed to guide our ongoing growth as an institution and our commitment to continuous improvement – the new NPS strategic plan, *A New View for the Future*. This plan sets forth an ambitious commitment on the part of NPS to become a “naval and defense oriented research university operating as a geographically distributed educational system, providing comprehensive graduate-level education in support of national and international security.”

To accomplish this vision, NPS will focus on quality education and research, be responsive to customer requirements and emerging needs, reach out to educate the total force, and form important new partnerships with national laboratories, research universities and global partners.

With support from the Board of Advisors, and following campus-wide presentation and discussion, Provost Ferrari and I traveled to Washington to present the plan. We received strong support from both the Chief of Naval Operations and the Secretary of the Navy. With NPS and Navy leadership endorsement, our plan will serve as a valuable, dynamic working framework for our institutional development over the next several years.

As an institution, we have challenges ahead of us, but I know those will be met with energy and creativity and strengthened relationships with our many partners. These will be exciting times for NPS and I look forward to working with you in support of this remarkable university.

# IN REVIEW

## NAVAL POSTGRADUATE SCHOOL

### President

Vice Admiral (USN, ret.) Daniel T. Oliver

### Provost

Dr. Leonard Ferrari

### Associate Provost Information Resources & Chief Information Officer

Dr. Christine Cermak

### Office of Institutional Advancement

Naval Postgraduate School  
1 University Circle  
Monterey, CA 93943

### Editors

John Sanders  
jfsander@nps.edu

MCCS (AW/SW) Jacqueline Kiel  
pao@nps.edu

### Production Editor

MC2 (AW) Sarah Bir  
sebir@nps.edu

### Journalists

MCCS (AW/SW) Jacqueline Kiel  
Barbara Honegger  
John Sanders  
Javier Chagoya

### Photographers

Javier Chagoya  
MC2 (AW) Sarah Bir

ON THE COVER: *The Defense Analysis Department, part of the Naval Postgraduate School's Graduate School of Operational and Information Sciences was heavily represented in a special issue of Third World Quarterly. The issue was titled "The Long War – Insurgency, Counterinsurgency and Collapsing States." Four of the authors are, left to right, Professors Hy Rothstein, Doug Borer, Glenn Robinson and Kalev Sepp.*

**5** **Wings Open to Fanfare**  
*President dedicates renovated  
Herrmann Hall wings*

**6** **Breakthrough!**  
*Software allows zero-propellant  
International Space Station maneuvers*



**9** **Stars and Stripes Forever**  
*NPS opens base to community  
for Memorial Day extravaganza*

**13** **Flight to the Top**  
*Trailblazing helo engineer  
named AHS honorary fellow*



---

### Also in this Issue:

4 President Outlines Strategic Plan

Board of Advisors Examines State of NPS

5 New President Cuts Ribbon  
on Glasgow Hall Annex

7 Alum Astronaut Phones from  
International Space Station

8 Professors Co-Author Book  
on Terrorism Financing

Cebrowski Institute Envisions  
New Research Initiative

12 Innovator Briefs New S&T Strategic Plan

NPS Researches Under-Ice Turbulence  
at Top of the World

14 N-STAR: Call for Warfighter/  
S&T Research Bridge

N-STAR and NPS Shine Light  
on Navy S&T Workforce Gap

15 Professor Receives Top Coastal  
Engineering Award

16 VCNO Guest Speaker at Graduation

NPS Honors Outstanding Faculty,  
Spring 2007 Grads

17 Conrad Scholar Recipients Present Theses  
to Navy's Budget Director

18 Defense Analysis Department Dissects  
Issue of the "Long War"

# President Outlines Strategic Plan

By MCCA (AW/SW) Jacqueline Kiel



Knowing the CNO and the SECNAV are both on board, NPS can forge its way forward. "We now have buy-in of the senior leadership," Oliver said.

Mullen's vision for the Navy, as presented in the "CNO Guidance for 2007" was used in the brief. "We need a Navy... with the intellectual capacity to meet unforeseen challenges in an increasingly complex and uncertain environment... that is capable of overcoming any challenge to our nation's maritime security."

The NPS vision is to be a naval and defense-oriented research university operating as a geographically distributed educational system, providing comprehensive graduate-level education in support of national and international security.

"If we're going to continue to attract world-class faculty, we need to become widely recognized as a research university," Oliver said emphatically.

Oliver acknowledges there will be challenges. "Competition for resources is pretty significant," he said.

Faculty and staff were briefed on the school's strategic plan in June by NPS President and retired Vice Adm. Daniel Oliver using the same brief he and Provost Leonard Ferrari used for both Chief of Naval Operations (CNO) Adm. Mike Mullen and Secretary of the Navy (SECNAV) Dr. Donald Winter.

While briefing the plan, Oliver mentioned that the narrative version is in draft form, and will be indefinitely. "We want it to be a living document," he explained.

Some of those challenges include providing graduate education to more Navy unrestricted line officers and other military officers while the U.S. is engaged in wartime operations, and engaging other U.S. government agencies as well as other nation states in support of homeland, national and international stability and security.

Oliver spoke of the strategic direction NPS will take, which includes a focus on quality.

"No other institution has the student body that we have," he said. "It tends to focus our efforts and our research. You have to focus on quality first."

Oliver keyed in on four criteria NPS will use to move forward, including only taking on customers in the national security business; accepting only mission critical tasks and those valuable to students and faculty; not taking on requirements without resources - a comment that brought on a huge round of applause; and anyone educated here is expected to be actively engaged in national security work upon departure.

Some of Oliver's final words to the audience were poignant. "We need to keep pace with national security, and the challenge of doing this can't be understated," he said. 

## Board of Advisors Examines State of NPS *by John Sanders*

President Daniel T. Oliver welcomed the NPS Board of Advisors (BOA) as they convened for their opening meeting of 2007 by noting that NPS has grown significantly in complexity, and some in size, in recent years.

The board reviewed the NPS strategic plan and discussed the university's alliance with the Air Force Institute of Technology as well as other partnership and educational initiatives. BOA members also met with deans, faculty and students, attended a research showcase poster session, and held a ceremonial cake cutting to observe the group's 40th anniversary since its establishment in 1967 by then Secretary of the Navy Paul Nitze.

In forming the NPS Board of Advisors, Nitze's goal was to impanel distinguished civilian educators, military officers, business and professional leaders who could advise NPS leadership and the Navy secretary on the effectiveness of the service's advanced education programs.

The Board of Advisors will convene its next meeting in Washington, D.C. on Oct. 16-17, 2007.



*(front row left to right) retired Adm. Stan Arthur; the Honorable Kim Wincup; Dr. Jack Borsting; retired Vice Adm. Lee Gunn; retired Vice Adm. Lyle Bien (back row left to right) Chairman of the Board of Advisors Dr. Robert Fossum; Major Gen. David Huntoon; President Daniel T. Oliver; Brig. Gen. Melvin Spiese (not pictured) Vice Adm. John C. Harvey, chief of naval personnel.*

# New President Cuts Ribbon on Glasgow Hall Annex

by Barbara Honegger

It couldn't have been a more auspicious beginning for retired Vice Adm. Daniel Oliver, the school's first civilian president. On Apr. 9, Oliver led VIPs, faculty, students and staff in the official ribbon-cutting and dedication ceremony for the new Glasgow Hall Annex.

"I'm delighted on my first day as president to be able to officially dedicate such an important NPS milestone," said the former chief of Naval Personnel. "This is both a culmination and a beginning for the Computer Science Department and Cebrowski Institute for Information Innovation and Superiority as their work becomes increasingly important to our national security."

The \$12 million, 32,000 square-foot, high-tech facility, also known as Glasgow East, is the new home of Computer Science Department and Cebrowski Institute. The institute champions and sponsors interdisciplinary defense and security research projects on the cutting edge of information technology. Architecturally seamless with the original building from the outside, it adds 90 state-of-the-art reconfigurable classrooms, offices and laboratories to the 150 offices, 19 classrooms, labs, lecture hall and auditorium of the original 180,000 square-foot Glasgow Hall.

"We're particularly proud to see so much integration in our faculty-student research between computer science and other dis-

ciplines," said Computer Science Department Chairman and Cebrowski Institute Director Peter Denning, "and this new facility will further stimulate that cross-fertilization critical for innovation."

"Cyberspace and cyberwarfare is what we do in the Computer Science Department and Cebrowski Institute, and this is the right building with the right capabilities at the right time for exploring and exploiting cyberspace," said Graduate School of Operational and Information Sciences Dean Peter Purdue.

Following the ribbon cutting, customer project manager for the annex project and Computer Science lecturer Scott Cote, who received an award from Denning for championing and coordinating the project at the ceremony, led a VIP tour of the annex's high-tech classrooms and laboratories.

"The Naval Postgraduate School is a world class institution and an incredible local, national and international treasure," said Rep. Sam Farr, a long-time supporter of the school, at the event. "I think we should make this an annual tradition. Let's dedicate a new NPS building every year."

It looks like Farr may soon get his wish. Cote is already well into the design phase of yet another Glasgow addition, Bldg. 205. That second annex will add another 20 offices and two classrooms and labs to the expanding Glasgow complex. 



(left to right) Computer Science Department Chairman/Cebrowski Institute Director Dr. Peter Denning; Graduate School of Operational and Information Sciences Dean Dr. Peter Purdue; Representative Sam Farr (D-Carmel); President retired Vice Adm. Dan Oliver and City of Monterey Mayor Chuck Della Sala.

## Historic Herrmann Hall Wings Open to Fanfare

by Barbara Honegger

The gold and blue ribbon whipped in the wind as the school officially dedicated the newly renovated and structurally upgraded east and west wings of Herrmann Hall, in a formal ceremony June 11. The event capped a \$31 million Navy project that won an award from the President's Advisory Council on Historic Preservation in February.

Together, the two wings provide 140 modern bachelor quarter suites, predominantly for international officer students, with kitchens and state-of-the-art computer connections accessing the NPS local area network.

NPS President retired Vice Adm. Daniel Oliver greeted more than 100 faculty, students, staff and local dignitaries in the new plaza outside the historic structure built by railroad baron Charles Crocker in the late 19th century.

"This is a happy day as we complete this milestone in the nearly 100-year history of the Naval Postgraduate School," Oliver said. "My hat is off to everyone involved for a job well done."

"The relationships the international officers who will live in these wings build with our

own future military leaders are increasingly important to our nation's security," said Alec Arago, district director for Rep. Sam Farr (D-Carmel). "These are the wings with which NPS will now be able to fly farther, faster and higher."

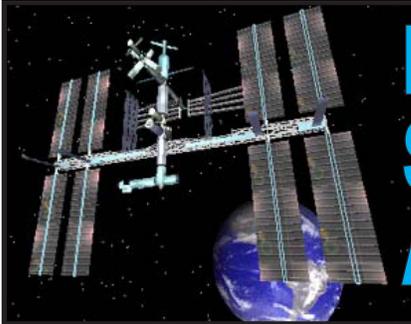
SOLTEK Pacific Construction Company of San Diego was the prime contractor for the project that brought the wings to full code compliance with advanced seismic safety and force protection features while preserving the original Victorian character of the building.

The wings first opened in 1888 as part of the second Victorian style Hotel Del Monte, after the original hotel was destroyed by fire in 1887. They were modified twice following the San Francisco earthquake of 1906 and a second major fire in 1924. The architects of the current "Hollywood Mediterranean" structure, the third hotel built on the site, kept the wings from the second hotel but changed the roof to be more in keeping with the new style.

After the ceremony, guests climbed the wide, newly carpeted stairway and walked down halls lined with framed photographs of historic moments from the hotel's past for a tour of open suites.



(left to right) Provost Leonard Ferrari; President retired Vice Adm. Daniel Oliver; District Director for Representative Sam Farr, Alec Arago; City of Seaside Mayor Ralph Rubio and City of Monterey Mayor Chuck Della Sala.



# Professor's Software Allows Zero-

# Propellant Maneuvers

By Barbara Honegger

Software created by a NPS professor has twice been used by NASA to maneuver the International Space Station (ISS) cost-free, without expending any fuel.

On Nov. 5 and again on Mar. 3, the space agency applied an optimal control software package developed by NPS Professor of Mechanical and Astronautical Engineering I. Michael Ross to identify and carry out the first-ever zero-propellant rotational maneuvers of the massive orbiting laboratory. Ross named his 'smart' program DIDO, after the queen of Carthage who is associated with a famous problem in mathematics.

Before DIDO, rotational, or torque, ISS maneuvers required the use of onboard thrusters, which use expensive fuel. The software scheduled a series of commands sent to three of the station's control moment gyroscope (CMG) attitude controllers that moved it through its historic fuel-free trajectory.

"We used the software for this unique application, to solve the zero-propellant maneuver which moves the International Space Station from one torque equilibrium attitude to another, and it worked," said NASA Guidance, Navigation and Control System Deputy Manager Louis Nguyen. "DIDO is important because it allows us to do what we need to do without expending valuable propellant on-orbit."

"These zero-propellant ISS maneuvers actually represent a number of breakthroughs in one," explained Ross, a member of the NPS Space Systems Academic Group. "The first is that DIDO found there is a zero-propellant solution to torquing the station in space. The second is that NASA has now actually used the software – in conjunction with boundary condition and dynamical data inputs supplied by NASA contractor Charles Stark Draper Laboratory – to maneuver the station in two successful tests. The first, last November, was a 90-degree turn, followed by a larger-angle 180-degree rotation this March.

"Third, in addition to being cost-free in fuel, DIDO exploits some of the latest advances in mathematical control theory to drive the station's control moment gyroscopes," Ross explained. "DIDO generates ZPM [zero propellant maneuver] trajectories by taking

advantage of the naturally occurring torques of the space environment to maintain the CMG within operational margins, like a sailboat tacking against the wind."

"DIDO is like a smart sailor who knows how to sail even against the wind -- against the gravity gradient," confirmed Nguyen. "The software solution allows us reset the Space Station's CMGs -- regain momentum -- by taking advantage of environmental disturbances such as gravity gradient torque."

"To the best of my knowledge, finally, this has been the fastest transition of a theoretical result to flight demonstration in the history not only of NASA, but in the field of autonomous systems," Ross noted.

"The importance of Professor Mike Ross's contributions to the International Space Station and NASA and the future of optimized, cost-effective space exploration and research cannot be emphasized enough," said NPS Prof. Rudy Panholzer, chairman of the school's Space Systems Academic Group. "It is both an outstanding example of the high value of the research being done at NPS and how military technology is supporting the civilian space program and saving millions of dollars in the process. We at NPS can be justifiably proud of our colleague Mike Ross for his incredible accomplishments."

"The DIDO-generated 90-degree maneuver trajectory was flown by NASA without using a drop of prop[ellant]!" Draper Laboratory's Manned Space Systems Group Leader Nazareth Bedrossian reported to Ross following the November test. "I want to thank you for the help you've provided us [at NASA] to get this far."

"The zero-propellant maneuver was viewed as a success by the space station program and our plan is to use it again," said Nguyen.

"DIDO is a core technology that we'll be perfecting to make it faster and better over the next ten years," Ross said.

Ross and NPS colleague Dr. Pooya Sekhvat recently won two National Reconnaissance Office (NRO) Director's Innovation Initiative (DII) Awards to develop DIDO applications to compute real-time optimal controls for freely-moving space and terrestrial autonomous vehicles.

For more information about DIDO and related research, contact Professor Michael Ross at (831) 656-2074 or send an e-mail to [imross@nps.edu](mailto:imross@nps.edu). For more information about the NPS Space Systems Academic Group, go to <http://sp.nps.edu/> or contact Professor Rudy Panholzer at (831) 656-2154 or e-mail [rpanholzer@nps.edu](mailto:rpanholzer@nps.edu). 

*Professor Michael Ross teaches NPS Space Systems Academic Group students.*



# Alum Astronaut Phones from International Space Station

By MCCS (AW/SW) Jacqueline Kiel



For the second time inside of a year, students, faculty, staff and some family members at the school were honored to participate in a video-teleconference with a member of the International Space Station (ISS) crew.

More than 30 people crammed into the president's conference room at NPS to speak with NPS alum Navy Capt. Michael E. Lopez-Alegria, known as Mike L-A, NASA astronaut and current commander of Expedition-14 aboard ISS. He arrived at the space station Sept. 20, 2006 and returned to earth April 20, 2007.

The opportunity to participate in such a significant event was coordinated by NASA visiting professor Dr. Jim Newman and Rudolf Panholzer, chair of the Space Systems Academic Group.

On behalf of the president, provost, faculty and staff, Graduate School of Engineering and Applied Sciences Dean Jim Kays offered a hearty welcome and hello to Capt. Lopez-Alegria: "We all congratulate you on the success of your mission and we thank you for what you're doing," he said.

With what proved to be characteristic humor, L-A answered with, "I'm not used to addressing such an august group. I don't think I've seen so many people wearing neckties since we've been up here."

Wearing a blue t-shirt, L-A was dressed in what he calls "the official parade uniform of the international space station."

L-A just broke the U.S. endurance record for time in space, which was originally co-held by retired Navy Captain and astronaut Dan Bursch, now an NPS professor, who held the record for almost five years. "Congratulations on your record," Bursch said. "I went out and got a haircut, call it a record hair cut."

To which L-A replied with aplomb, "you probably won't have to get another haircut before my record's broken, but thanks for the effort." However, to this day he still holds the record.

L-A told the group it was a privilege to be able to speak with them, saying, "There are more graduates from [NPS] that are, or have been, in the astronaut corps than from any other institution in the country, and I think that's pretty telling and pretty important."

The attentive audience was treated to an explanation of the various modules, where science is done and where they eat and sleep. L-A also spoke about the latest construction phase.

One young boy asked L-A to toss something in the air so he could see what it would look like. "I'll toss myself," L-A said lightheartedly. He did a perfect somersault in front of the camera and then proceeded to show off what he called "some pretty unusual clothes, a high-tech/low-tech gravity suit." The special pants are used to keep the blood from pooling in lower extremities. He explained that it is all in preparation for reentry.

Lopez-Alegria went further, demonstrating

how liquid reacts in space. "Eating and drinking are fun up here, as you can imagine, and it never gets boring." He then tossed a chocolate-covered espresso bean. "The hard part is you have to chase down everything you let escape," he remarked while going after the wayward bean.

L-A also talked about playing on the space station. "We all have various toys we play with," he said. "We were doing some maintenance and behind a panel we found a little nerf ball dart gun. I don't know if it was here when you were here, Dan," he said, speaking to Bursch.

Maurice Weir, a retired NPS mathematics professor, had L-A as a student at NPS. While L-A remembers one of Weir's courses had been particularly difficult, Weir called

L-A one of the best students he ever had, to which L-A replied with wit, "I can now say for certain that you don't remember me at all."

The 15 minutes allotted for this special long-distance video phone call actually ended up lasting 26 minutes, to the delight of all involved.

"Oh wow, what a treat," Weir gushed after the VTC. "It was just fantastic being able to communicate with astronauts as they circle the globe every 90 minutes. I was awed. He was a wonderful student... gifted, and that's clear from his success."

"It's a privilege to be up here," L-A told the group. "I can't think of any other way to spend my so-called work day." 🍪



*Eight-year old Mark and nine-year old Julianne asked Lopez-Alegria what it's like to float and what stars look like from the space station.*

Several children were in the audience. They asked some of the most interesting questions, resulting in quite unexpected and sometimes humorous answers from L-A.

Schedules aboard the space station were the subject of one question, prompting L-A to explain what happens in a typical 24-hour period. Half of Saturday and all of Sunday is considered personal time. The rest is considered work or sleep time.

Regardless of the day, working out is a must. "Everyday we have two-and-a-half hours set aside for exercise and that's pretty important for us for when we return," L-A explained. "For some people that's great, but for some it's kind of a drag."



## Professors Co-Author Book on Terrorism Financing

By Barbara Honegger

Faculty members Jeanne K. Giraldo (right) and Harold A. Trinkunas are co-authors of a pioneering book on how to track and cut off the financial life blood of transnational jihadi terrorism.

*Terrorism Financing and State Responses: A Comparative Perspective*, published by Stanford University Press, summarizes the literature on terrorist financing, cuts through the myths that have developed around this critical issue and assesses current policy debates. It comprehensively reviews the state-of-the-art knowledge of terrorism financing and the effectiveness of various state counterterrorism strategies through a series of case studies of terrorist organizations, including al-Qaida and Hezbollah.

"Financial and material resources are the life blood of terrorist operations, so cutting the financial infrastructure of terrorist organizations off at the root is the key to their defeat," said Trinkunas. "A few popular books on terrorism financing have been published, but this is one of the first to take a scholarly and intellectual approach, which is vitally important."

"One of the great strengths of NPS we were able to tap for this book is the solid base of regional expertise of our National Security Affairs faculty members and their links to high-level government policy makers," Giraldo stressed.

In addition to co-editors Giraldo and Trinkunas, NPS faculty Anne Clunan, Aurel Croissant, Thomas Johnson, and Jessica Piombo; then Research Associate Daniel Barlow; and former NPS student David Sanchez also have chapters in the anthology. Other contributors are high level counterterrorism officials. Author Victor Comras, for example, was a long-time member of the Foreign Service, a U.S. ambassador and one of five international monitors charged with overseeing United Nations Security Council measures against al-Qaida and the Taliban.

The book will be used in a National Security Affairs Department course on terrorism financing in Fall Quarter 2007.

## Global Warming Heats

### Up at Cebrowski Institute

By Barbara Honegger

Global warming is heating up as an issue with potentially serious national security consequences and the Naval Postgraduate School's Cebrowski Institute for Innovation and Information Superiority is responding to the call.

On May, 2, the institute's deputy director Sue Higgins held a participatory briefing on the threat multiplier effects of global climate change and the new interdisciplinary research opportunities they present for NPS. The main source for the presentation was a recent Center for Naval Analyses (CNA) report by a blue-ribbon panel of some of the nation's most respected retired three- and four-star admirals and generals. The military leaders studied the likely effects of global climate change, how evolving environmental conditions are likely to impact national security over the next three to four decades and what actions the U.S. and other nations should take to prevent, mitigate and manage these effects.

The most important breaks with the past, the panel said, are to act as if the consensus scientific opinion that human activity significantly impacts global climate change is a fact – they put it's likelihood at 90 percent – and integrate responses to the projected effects of global warming at all

levels of the national security planning process.

"The trends are clear," the panel concluded. "The consequences projected by the consensus scientific opinion ... pose grave implications for our national security."

Just some of the impacts of escalating global climate change mentioned in Higgins' brief are mass migrations away from inundated and threatened coastal areas; an increased spread of infectious diseases and health catastrophes from floods and more frequent extreme weather conditions; escalating ethnic and religious conflicts; growing conflicts over natural resources, especially water; impaired food production; disruption of oil supplies; and an increased potential for failed states, which serve as breeding and staging grounds for international terrorism.

NPS graduate retired Adm. Joseph Lopez, a panel member, zeroed in on the strategic link: "Climate change will provide the conditions that will extend the war on terror."

Higgins said that the Cebrowski Institute will continue to explore the opportunity these challenges represent for interdisciplinary research at NPS, and by NPS in collaboration with other Navy and academic research facilities in the Monterey Bay area. It will host a series of participatory brown-bag briefings by key experts in the field and encourage faculty and students to take up the academic and research challenges posed by the CNA and other reports.

For more information about the Cebrowski Institute, go to <http://www.nps.edu/cebrowski>.

The CNA report is at <http://securityandclimate.cna.org/>



# Memorial Day Concert on the Lawn

By Barbara Honegger

*"Stars & Stripes Forever"*



Genevieve Micheletti



*The* sun broke through just in time to ensure a perfect day for the Monterey Bay Symphony's Memorial Day Concert on the Lawn at NPS. More than 3,000 music lovers, sporting every color of the rainbow, stretched as far as the eye could see at the outdoor concert on the lawn in front of Herrmann Hall. The theme of the May 28 concert was "Stars and Stripes Forever."

Following a warm welcome by master of ceremonies, local KION television news anchor Hunter Finnel, and a moving invocation by NPS Chaplain Darrell Wesley, NPS President retired Vice Adm. Daniel Oliver took the podium to remind the audience of the real reason they were there.

“As President of this distinguished university, it’s an honor to celebrate with you this day of remembrance for America’s heroes who have died protecting our country and our freedoms,” Oliver said.

Before handing the baton to Monterey Bay Pops Orchestra conductor Carl Christensen, Oliver presented one of the university’s highest honors, the Distinguished Alumni Award, to retired Vice Adm. Thomas J. Hughes.

“Speaking of American heroes, Admiral Hughes has served his country continuously for the past half century and continues to do so today, serving his fourth consecutive year as Conrad Chair of Financial Management here at the Naval Postgraduate School,” Oliver said. “Beyond capable, he is a passionate leader who makes an indelible impression on everyone whose life he touches.”

Oliver reviewed Hughes exceptional naval career, including commanding destroyers and a destroyer squadron, amphibious ships and service force ships; and serving on the staffs of the Chief of Naval Operations and Joint Chiefs of Staff. When he retired from active duty in 1987, Hughes was the Deputy Chief of Naval Operations for Logistics.

“But most importantly, he is one of our own,” Oliver stressed. “In 1962, Admiral Hughes received a Master of Science degree in operations analysis from the Naval Postgraduate School.”

“Memorial Day is our biggest open house of the year and the one that best enables the local community to have gate access and learn more about the educational and research activities at NPS,” said Provost Leonard Ferrari before the event. Enabling that educational outreach, representatives from three of NPS’ schools manned information booths on the east lawn.

In addition to the concert, there was a spectrum of fun and educational activities for both kids and adults including guided tours of the historic Old Del Monte Hotel, now NPS’ administration building, and the Arizona cactus garden; kids’ activities overseen by Jennifer Butler, including face painting, two bouncy castles and various contests; and vibrant displays of talent by the Dance Kids of Monterey County, the Aditi Foundation dancers, the Del Monte Brass and the Cypressaires Harmony Ensemble. During the actual concert, Genevieve Micheletti received a standing ovation for her virtuoso violin performance that seemed to turn the informal setting into an outdoor Carnegie Hall.

Courtesy of the Knox Library, guests could visit an historic of Midway Remembrance poster display in the hotel lobby.

Sponsors of the 2007 concert series are AT&T Pebble Beach Charities, the Naval Postgraduate School, the NPS Foundation, *The Monterey County Herald*, the Community Foundation for Monterey County, the City of Monterey, the Arts Council for Monterey County, the Music Performance Funds of the Recording Industry, the Carmel Bach Festival, Communities Advancing the Arts, the Cotter Foundation, the Monterey Peninsula Foundation, and local media stations KION TV (CBS), KCBA TV (Fox), KWAV 97 FM radio and Magic 63 AM radio. The NPS Foundation received special thanks for supporting volunteers for the Concert on the Lawn.

Originally known as Decoration Day, Memorial Day was first celebrated on May 30, 1868, at Arlington National Cemetery when flowers were placed on the graves of soldiers who fought on both sides in the Civil War. The day of remembrance has since grown to honor all who have died while serving the nation in the line of duty. In 2000, Congress passed a resolution encouraging a National Moment of Remembrance as part of Memorial Day, in which all Americans are encouraged to pause “to voluntarily and informally observe, in their own way, a moment of remembrance and respect” for those who have given the ultimate sacrifice. 





# NAVY'S *Research Innovator* Briefs New S&T Strategic Plan *By Barbara Honegger*

The Navy's innovation catalyst, Office of Naval Research Director of Research Dr. Patricia L. Gruber, briefed faculty and students on the Navy and Marine Corps' new science and technology (S&T) strategic plan, Apr. 18.

Gruber was at NPS to participate in ONR's Naval Research-Science and Technology for America's Readiness (N-STAR) conference on "Bridging the Officer and Researcher: A Critical Relationship for Transitioning Naval Innovation, Apr. 17 to 19.

As principal assistant to Chief of Naval Research Rear Adm. William Landay III, Gruber's mission is to ensure the U.S. remains the world's premier naval power. Her office integrates the Office of the Naval Research (ONR) discovery and innovation S&T portfolio in support of all naval mission areas; enables the transition of new technologies to the advanced development stage; and scouts for and nurtures naval and academic science and engineering intellectual capital resources worldwide.

According to Gruber, the core goals of the Navy's new S&T strategic plan, approved by the Naval Science and Technology Corporate Board in 2006, are to ensure that the Navy's S&T investment is aligned with key naval missions and future capability needs; to leverage U.S. and global technology; to find and recruit the 'best and the brightest' scientific researchers and engineers to join the Naval Research Enterprise; to balance and manage ONR's S&T portfolio; and to effectively communicate the new S&T vision to senior leadership.

"The new science and technology strategic plan is for both the Navy and Marine Corps, not just for ONR," Gruber stressed, "and it's being implemented now to guide the way we do business going forward.

"A lot of what we do at ONR is to manage S&T investments to ensure the Navy has a long-term focus while remaining flexible and responsive to current operational needs, much like you'd manage the portfolio of a major U.S. corporation," Gruber noted. "That means striking the right balance between visionary, high-risk basic

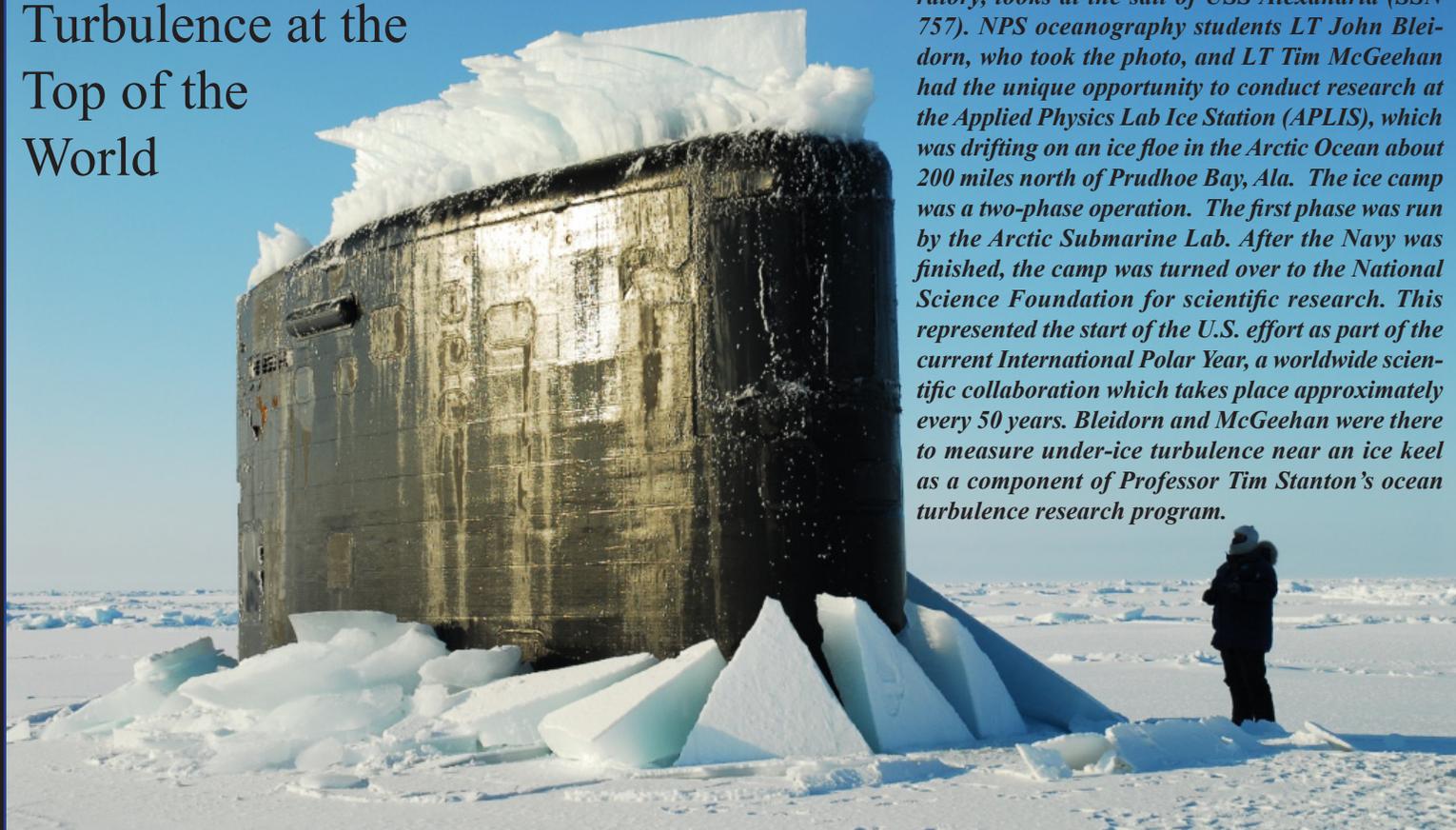
research, discovery and invention and early applied science -- now at about 40 percent of budget -- and the rest of the portfolio. A critical part is the 10 percent devoted to leap-ahead innovation, like the electromagnetic rail gun. Thirty percent goes to acquisition enablers, and another 10 percent is set aside for quick-reaction S&T. And because we don't know where the next scientific breakthrough is going to come from, or when, we also build in a flexibility buffer of 10 percent that's not specifically allocated.

"Another of my key responsibilities is finding, tapping and growing the intellectual capital of our basic and applied research workforce," added Gruber.

"One of the major challenges we're facing is, where are we going to get the scientists and engineers of tomorrow's Navy?" Gruber asked rhetorically. "Today's reality is that a growing number of those researchers will not be Americans, so we're expanding our intellectual capital search and outreach worldwide."

The new S&T Strategic Plan is on the ONR web site. 

## NPS Researches Under-Ice Turbulence at the Top of the World



*Randy Ray, an employee of Submarine Development Squadron Five Detachment Arctic Submarine Laboratory, looks at the sail of USS Alexandria (SSN 757). NPS oceanography students LT John Bleidorn, who took the photo, and LT Tim McGeehan had the unique opportunity to conduct research at the Applied Physics Lab Ice Station (APLIS), which was drifting on an ice floe in the Arctic Ocean about 200 miles north of Prudhoe Bay, Ala. The ice camp was a two-phase operation. The first phase was run by the Arctic Submarine Lab. After the Navy was finished, the camp was turned over to the National Science Foundation for scientific research. This represented the start of the U.S. effort as part of the current International Polar Year, a worldwide scientific collaboration which takes place approximately every 50 years. Bleidorn and McGeehan were there to measure under-ice turbulence near an ice keel as a component of Professor Tim Stanton's ocean turbulence research program.*

# Professor Emeritus Bob Wood Joins Ranks of Helicopter Pioneer Sikorsky By Barbara Honegger

Former chairman of the Department of Aeronautics and Astronautics Prof. Emeritus E. Roberts "Bob" Wood has been named an honorary fellow of the American Helicopter Society (AHS) International. The prestigious induction took place at the AHS 63rd Annual Forum and Technology Display Grand Awards Banquet, May 2 in Virginia Beach, Va.

The vertical flight society grants honorary fellow status to just two of its thousands of members each year in recognition of a career of leadership and innovation "that has significantly advanced the interests of the vertical flight industry." The first honorary fellow was pioneering helicopter inventor Igor I. Sikorsky.

"Bob Wood's trail-blazing research and his dominant role in the design, development and flight demonstration of higher harmonic control on the OH-6A helicopter is still inspiring succeeding generations of engineers to adapt that and similar methods of controlling vibratory loads, vibrations and noise, and of improving flight performance," wrote Georgia Institute of Technology School of Aerospace Engineering Chairman Dr. Robert G. Loewy in a letter supporting Wood's nomination.

"My first reaction is that I'm grateful for the opportunity to have had such a rewarding career working with three of the world's leading helicopter companies – Sikorsky, Lockheed and Hughes -- finding new and better ways to reduce noise and vibration in helicopters, and then being able to teach this at seven fine universities, culminating with the Naval Postgraduate School," said Wood. "It's been very challenging and rewarding, and being named an honorary fellow puts all of this together."

From 1988, when Wood came to NPS, until his retirement and promotion to professor emeritus in 2004, he taught an annual three-course series on the fundamentals of helicopter aerodynamics, helicopter stability and control, and helicopter design. Under that series, Cmdr. Dr. Mark Couch and retired Lt. Cmdr. Dr. Rob King, both Navy helicopter pilots, were part of Wood's 1993 student team that took first place for their design of an attack helicopter in the AHS national competition. His students also won the top student design competition in 1995 and, over nine years of entries, never took less than second place.

"Bob's work with both the [Lockheed AH-56A] Cheyenne helicopter and higher harmonic control were truly innovative," said King. "To follow that up with the success of the Army Apache helicopter [Boeing AH-64] and successful tests of higher harmonic control on the one-of-a-kind Hughes OH-6A helicopter is truly remarkable. So it comes as no surprise that AHS has selected him for what is essentially the helicopter industry's lifetime achievement award. It is richly deserved."

"When you ask around the country for the best of the best in the field of rotary wing aircraft, Bob's name comes up at the top," said Couch, currently executive officer for Navy Reserve Officers Training Corps at the University of Illinois. "We were incredibly fortunate to have him as a professor and mentor. I can't imagine anyone more deserving of this award."

Wood's vibration control expertise was in top demand by the national command structure.

"In the early 1960s when I was part of the dynamics group at Sikorsky Aircraft, we were called in to damp the vibration of President Kennedy's writing table on Marine One, which was a Sikorsky S-61," Wood recalled. "Whenever he rode in the presidential helicopter, he had difficulty writing and signing documents and asked us to find a way to fix the vibration."

We did this by designing small isolators which were attached to the bottom of the legs of the table."

Wood received his bachelor's degree in civil engineering from Cornell University, then served as an air installations officer with the U.S. Air Force in the Korean War. Returning to civilian life, he earned both a master's degree in engineering mechanics and a doctorate in engineering from Yale University.

Wood began working for Sikorsky Aircraft in 1957. As director of Lockheed California Company's technology division from 1972 to 1975, he played a key role in Lockheed's effort to design and develop the advanced mechanical control system for the AH-56A Cheyenne compound helicopter successfully tested at Yuma, Ariz. He later directed the Lockheed team that designed and delivered to NASA the blades, each 62.5 feet long, for the nation's first windmill, NASA's horizontal axis wind turbine, which is still in operation in Plumbrook, Ohio. Wood served as project manager and team leader for the NASA-Army contract for the successful first flight of the NASA-Army Hughes higher harmonic control OH-6A helicopter in 1982.

Wood is a board member of the American Helicopter Society and served as its forum technical director in 1986, setting new records for attendance and technical content. He can be reached at [wood@nps.edu](mailto:wood@nps.edu). 

*Professor Emeritus E. Roberts "Bob" Wood at the controls of a Eurocopter Group Aero-spatiale helicopter at Monterey, Calif., Airport.*



# N-STAR

**Call for Warfighter/S&T Research Bridge** *By Barbara Honegger*

Students and a former astronaut now on the faculty hailed the Navy's clarion call for stronger links between its warfighters and civilian science and technology (S&T) researchers, at the Office of Naval Research (ONR) Naval Research-Science and Technology for America's Readiness (N-STAR) conference at NPS, Apr. 17.

"We need to bring more warfighters to S&T and more S&T to the warfighter, and NPS is our optimal audience to do this," said N-STAR Director and NPS alumnus Kirk Jenne (Physics, 2003), the School's first distance learning student in engineering acoustics and now liaison between ONR leadership and the naval warfare centers. "We're here to actively engage your active duty, mid-level officer students with operational experience in the S&T process; encourage them to choose S&T mission areas for the remainder of their military careers; and identify and catalyze opportunities for increased collaboration between NPS and the warfare centers."

"The Naval Postgraduate School is the ideal crossroads to accomplish this N-STAR mission," agreed conference coordinator Assistant Professor of Electrical and Computer Engineering Todd Weatherford. "Where else do you have a large number of O-3s and O-4s in one place who have just decided for a 20-year naval career at the one time that most choose science and technology for their advanced thesis research?"

NPS National Reconnaissance Office Aerospace Chair Professor and record-setting astronaut retired Navy Capt. Dan Bursch shared a graphic example of the importance of integrating officers with operational experience

into the S&T innovation process.

"It's critical for the warfighter – or, in my case, astronaut – to be full members of the S&T development and testing team to ensure new products and systems actually meet the requirements they were designed to fulfill," stressed Bursch, who until recently held the U.S. record for the longest time in space.

"A great example is the International Space Station [ISS] caution and warning system," he noted. "Back in 1996, the U.S. and Russia wanted different emergency signals on the station. We wanted five warning tones, and the Russians wanted three different tones, which would be extremely confusing in an emergency when you need clarity the most. So an astronaut team, including myself, worked with NASA's engineers in the early development stage to get it down to three tones that were acceptable to both sides. Without the input of the astronauts, who have to live and work with the system, in the Caution and Warning System Integration Team, it wouldn't have flown."

NPS National Security Affairs officer student Lt. Cmdr. Rich Butler shared his experience as a commander of coastal patrol ships.



**Lt. Cmdr. Rich Butler (left) and Assistant Professor Todd Weatherford inspect a prototype pulse detonation engine developed by the NPS Rocket Propulsion Laboratory.**

"During Operation Iraqi Freedom, our sensors, weapons, networks and connectivity didn't mission match with what the Navy needed to do along the coasts and inland rivers," Butler told representatives from eight naval warfare centers. "ONR and N-STAR need to focus more on the green and brown water, and coordinate with small boat warfighters so we can continuously monitor littoral situations."

"We're all in this boat together," said NPS President retired Vice Adm. Daniel Oliver in closing the conference. "I look forward to an ongoing win-win relationship linking the experience and expertise of our warfighter students and world class faculty with the naval S&T community." 

## **N-STAR and NPS Shine Light on Navy S&T Workforce Gap** *By Barbara Honegger*

NPS and ONR have joined forces to address a pending national security crisis – the Navy's aging science and technology (S&T) workforce about to retire in record numbers at a time when fewer U.S. citizens are pursuing S&T careers.

ONR's Naval Research-Science and Technology for America's Readiness (N-STAR) program and NPS co-planned and co-hosted the second N-STAR Science and Technology Conference on "Bridging the Officer and Researcher: A Critical Relationship for Transitioning Naval Innovation," held at NPS Apr. 17 to 19. The three-day event focused on Navy S&T programs at NPS and eight naval systems command warfare centers, bringing together 100 researchers, 90 presentations and 70 manned poster presentations.

"A major N-STAR mission is to attract the best and the brightest scientists, engineers and technology professionals to advanced S&T degree programs and enroll them in the Navy's S&T workforce by 2012," said N-STAR Director Kirk Jenne, an NPS graduate in underwater acoustics and conference co-chair. "We're here because NPS' mid-level officers are the optimal audience to attract to the Navy's Research Enterprise to achieve this goal."

"Through a series of strategic initiatives including N-STAR, NPS is positioning itself to be a significant provider of the Navy's critical future Navy S&T workforce," said Provost Leonard Ferrari.

NPS is ONR's N-STAR Military Technology Officer subcomponent, providing fully funded fellowships to active duty and reserve officers separated from service.

# Professor Receives Top Coastal Engineering Award *By Barbara Honegger*

Distinguished Emeritus Professor of Oceanography Edward B. Thornton has received the world's most prestigious honor in the field of coastal engineering, the American Society of Civil Engineers (ASCE) International Coastal Engineering Award. Thornton was presented with the award at the professional society's Coastal Sediments Conference May 16 in New Orleans.

The association's Coasts, Oceans, Ports and Rivers Institute Board of Governors, who juried the selection, chose Thornton for his "pioneering and fundamental contributions to near-shore hydrodynamics and sediment transport." The selection committee and ASCE executive director noted his leadership in the field and "the predictive tools you have provided to the community and the Navy to predict near-shore conditions."

"It was a big surprise when I learned I'd been selected for this award, which is the highest in my field worldwide -- like a lifetime achievement award," Thornton said. "It was announced at a retirement party held for me at the American Geophysical Union meeting in San Francisco last December where I was surrounded by colleagues."

Thornton has spent his decades-long career measuring waves and the underwater currents they create in the near-shore waters of the world's oceans.

"It's important to understand waves and how they break because, in the process of breaking they generate currents and these currents stir the bottom sediments, which in turn leads to beach erosion," Thornton explained.

Thornton's research is the basis for the Navy's Standard Surf Model that has been used by the Marine Corps and Special Forces since 1985 to measure waves and currents.

"I'm also part of the team that has developed a new model,"

he said. "One of my students, CDR Bruce Morris, evaluated and improved the model using data we had acquired for his Ph.D. dissertation."

For Navy special operations, Thornton's critical contribution is captured by the slogan, "May the current be with you."

"Navy divers need to know the strength and direction of near-shore currents and the height of near-shore waves to successfully plan and execute amphibious operations," Thornton said. "If you're a SEAL having to swim to shore, you want the currents to be with you, not against you. You want to avoid rip currents, where the direction is out to sea, or you'll end up like a salmon swimming upstream, and to avoid them you need to know where they are. This research and the predictive models based on it are important for all littoral operations."

Thornton earned his bachelor's degree in physics from Willamette University, a second bachelor's in mechanical engineering from Stanford University, and a master's in oceanography from Oregon State. He received a master of engineering in civil engineering from the University of Florida, where he was a research associate in the Department of Coastal and Oceanographic Engineering, and was an oceanographer and project manager with Marine Advisors, Inc.

Thornton joined the Naval Postgraduate School faculty in 1969 after earning a doctoral degree in coastal engineering, also from the University of Florida. Between then and his retirement this February, he taught and was thesis adviser to more than 90 master's students and nine Ph.D. students, mentored nine post-doctoral fellows and published more than 60 peer-reviewed articles.

A number of Thornton's students have reached the pinnacle of their fields.

"One of my former students, Rear Adm. Tim McGee (Oceanography, 1986), is now Commander of Naval Meteorology and Oceanography (METOC) and the only naval officer from the METOC community to have made admiral," Thornton noted. "He did his master's thesis on erosion in Monterey Bay."

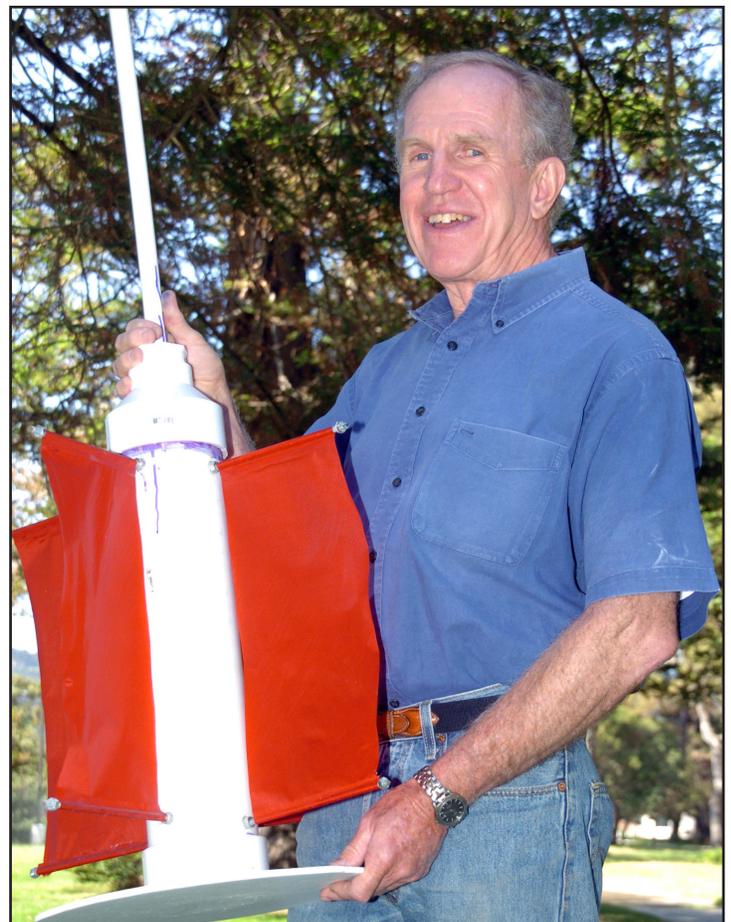
Despite his "retirement," Thornton continues with both research and teaching at NPS, including a course on time series analysis.

Thornton has been a member of the International Coastal Dynamics Conference Organizing Committee since 1994. Between 1978 and 1985, he served on the Scientific Steering Committee for the first National Sea Grant Program's "Nearshore Sediment Transport Study." He was on

ASCE's Coastal Engineering Technical Committee from 1982 to 1986, as well as its Awards Committee from 1984 to 1988. Thornton was also a member of the National Academy of Sciences National Research Council Committee on Coastal Engineering from 1986 to 1989, and the Logistics Committee for the Sandy Duck near-shore experiment between 1990 and 1997. He served as chairman of the American Geophysical Union Technical Committee on Nearshore Oceanography from 2000 to 2002.

Thornton is a member of the American Society of Civil Engineers, the American Geophysical Union, the scientific professional society Sigma Xi and the American Shore and Beach Preservation Society. 

*Professor of Oceanography Edward B. Thornton holds a drifter float with self-recording Global Positioning System tracker that measures surface near-shore rip currents.*



# Vice CNO Rallies Spring 2007 Grads *By Barbara Honegger*

Vice Chief of Naval Operations (VCNO) Adm. Patrick M. Walsh flew more than 3,000 miles to inspire 245 U.S. officers, 53 international officers and 12 Department of Defense civilian graduates to even greater achievements in their new operational assignments, in his keynote address at the Naval Postgraduate School's Spring 2007 graduation ceremonies June 15.

Officiating at his first commencement exercises, NPS' new president retired Vice Adm. Daniel Oliver introduced Walsh -- a former Blue Angels pilot and previous commander of U.S. Naval Forces Central Command and U.S. 5th Fleet -- as "a leader, a scholar, a gentleman and a friend." The VCNO quickly returned the compliment.

"I think I can speak for all those here and in Washington that we are very fortunate to have you as the president of the Naval Postgraduate School," said Walsh. "On behalf of the Navy, I want to express our appreciation to NPS faculty and staff for their scholarship, teaching and service to this institution. We are exceedingly grateful for all you have done and continue to do on our behalf."

The Navy's second highest ranking military officer then turned his attention to the real reason he came to Monterey.

"The most important resource we have as a service comes from the intellectual wealth in this room," Walsh told the assembled graduates. "The preparation you have re-

ceived, the discipline you have learned and the academic frame of reference you now enjoy is in high demand and is exactly what we need in the world today. Whether you've studied in technical or non-technical fields, we need you. We need you because your academic work and the time you've spent here have shaped an independent and critical perspective. This curriculum, this educational program and quotas for this campus are in demand worldwide."

Both the VCNO and the graduates themselves stressed the importance of the relationships they've developed at NPS.

"I think we'll be realizing the full value of the top notch education and relationships we've formed here over many years," said Lt. Suzanne Schang, one of five Graduate School of Business and Public Policy Conrad scholars who was also recognized for outstanding community service.

"NPS faculty, students and staff all pulling their weight together is unlike anything I'll probably ever see in the Navy," said Lt. Cmdr. Rich Butler, a National Security Affairs graduate recognized for his outstanding thesis, and the recipient of the NPS Superior Service Award.

Walsh and Oliver oversaw the presentation of five doctoral, 219 Master of Science, 60 Master of Arts, 39 Master of Business, one electrical engineer, and two Executive Master of Business degrees.



*Vice Chief of Naval Operations Admiral Patrick M. Walsh.*

One hundred forty five graduates were from the Navy, 18 from the Marine Corps, 37 from the Army, 30 from the Air Force and one from the Coast Guard. Twelve were from the Naval Reserve, one from the Army Reserve and one from the National Guard. Seventy-two officer students also received Joint Professional Military Education certification from the Naval War College curriculum located at NPS. 

## Students, Faculty Honored in Spring Awards Ceremony *By Barbara Honegger*

The school recognized more than 30 students and five faculty members for outstanding academic and instructional achievement at the Spring Quarter 2007 Awards Ceremony, June 5.

The Admiral John Jay Schieffelin Award for Excellence in Teaching went to Computer Science Senior Lecturer and former Marine Corps electronic warfare officer John David "J.D." Fulp.

Associate Professor of National Security Affairs Maria Rasmussen received the Lieutenant Commander David L. Williams Outstanding Professor Award. Retired Rear Adm. Paul Shebalin was honored with the Meyer Award for Teaching Excellence in Systems Engineering (Integrated Projects). Graduate School of Business and Public Policy Associate Professor David R. Henderson received the Louis D. Liskin Outstanding Faculty Award and the

Northrop Grumman Faculty Award for Excellence in Systems Engineering went to Systems Integration Lecturer Gary Langford.

*The Spring 2007 class student awardees were:*

2007 Warren Randolph Church Award for Excellence in Mathematics: U.S. Army Maj. Carlos Fernandez

Jim and Tina Heldman Award for Excellence in Regional or Security Studies: German Air Force Lt. Col. Michael Stolzke

Outstanding United States Air Force Graduate Award, Department of National Security Affairs: U.S. Air Force Maj. David K. Moeller

Association of the United States Army, General Joseph W. Stilwell Chapter, Award for Outstanding Army Student; U.S. Army Maj. Matthew A. Zahn

Naval Postgraduate School Outstanding Academic Achievement Award for Department of Defense Student: Lt. Cmdr. David C. Sears

Naval Postgraduate School Outstanding Academic Achievement Award for International Students: Hellenic Air Force Lt. Nickolaos Papalexidis

Marine Corps Association Superior Service Award for Outstanding U.S. Marine Corps Student: U.S. Marine Corps Maj. Sean P. Riley

Air Force Association Award for Outstanding U.S. Air Force Student -- U.S. Air Force Maj. Jodi A. Neff

Armed Forces Communications and Electronics Association Award: U.S. Marine Corps Capt. Christopher Steven Tsirlis and Hellenic Navy Lt. Ioannis Katzourakis

Army Chief of Staff Award for Excellence in Operations Research: U.S. Army Maj. Alexander D. MacCalman

Space and Naval Warfare Systems Command Award in Electronic Systems Engineering: Ens. David A. Semko

Naval Supply Systems Command Award for Academic Excellence in Management: Lt. Cmdrs. Bryan Lundgren and Brian Vosberg

Assistant Secretary of the Navy (Research, Development, and Acquisition) Acquisition Excellence Award: Lt. Cmdr. Bryan Lundgren

Department of the Navy Award for Academic Excellence in Financial Management: Lt. Tony Scinicariello

Joint Chiefs of Staff Command, Control and Communications Award for Academic Achievement: Lt. Cmdr. Thomas G. Conroe

Army Acquisition Corps Award for Scholastic Achievement: U.S. Army Maj. Nathan Winn

Rear Admiral Grace Murray Hopper Information Technology Management Award: U.S. Army Maj. Anthony J. Newston and U.S. Marine Corps Capt. John H. Housand Jr.

Surface Navy Association Award for Excellence in Surface Warfare Research: Lt. Matthew W. Foster

Military Operations Research Society Stephen A. Tisdale Graduate Research Award: Lt. Matthew W. Foster

Graduate School of Business and Public Policy Faculty Outstanding International Student Award: Hellenic Navy Lt. j.g. Anthi Desinioti and Lithuanian Air Force Capt. Aidas Kerutis

Northrop Grumman Student Award for Excellence in Systems Engineering and Analysis: Lt. Cmdr. Joseph F. Torian and Michael Galli

Monterey Council Navy League Award for Highest Academic Achievement: Cmdr. Brad Botkin

Admiral Thomas R. McClellan Award for Academic Excellence in the Graduate School of Business and Public Policy: Cmdr. Brad Botkin

Lewis D. Liskin Award for Excellence in Business and Public Policy: Cmdr. Brad Botkin

Conrad Scholar Award for Distinguished Academic Achievement in Financial Management: Cmdr. Brad Botkin, Cmdr. Rob Wil-

liams, Lt. Chad Roum, Lt. Suzanne Schang and Lt. Joe Rysavy

American Society of Military Comptrollers Award for Excellence in Research: Lt. Joe Rysavy

Naval Postgraduate School Superior Service Award: Lt. Cmdr. Richard Butler

Joint Chiefs of Staff Command, Control and Communications Award for Academic Achievement: Lt. Cmdr. Thomas G. Conroe

Meyer Award for Outstanding Student in Systems Engineering (Integrated Projects): Ens. Andrew Michael Cole; Ens. Yilei Liu; Lim Horng Leong, Singapore Defense Science and Technology Agency; and Henry D. Nguyen, Northrop Grumman Ship Systems

The Louis D. Liskin Award for Excellence in Regional Security Studies: U.S. Marine Corps Maj. Gregory W. Lewis

Oceanographer of the Navy Award for Outstanding Academic Performance in Meteorology and Oceanography: Lt. Robin Corey Cherrett 

## Conrad Scholar Recipients Present Theses *By Javier Chagoya*

Five Financial Management students from the School of Business and Public Policy have been selected as the June 2007 recipients of the Conrad Scholar Award. On Tuesday June 5, they presented their theses to the Director of the Office of Budget (FMB) Rear Adm. Stanley Bozin at the Pentagon in Washington, D.C.

The Conrad Scholar Academic Achievement in Financial Management Program is designed to identify the future leaders of the

Department of the Navy's financial management community. Top students are selected as they begin the Master's program thesis process. Their thesis topics are selected to address issues of importance to the Department's financial management community and are approved by the program sponsor, the FMB.

The value of student research is recognized as a way to provide accounting and financial solutions to DoD-relevant problems. As a further outlet for NPS student

research, the theses are posted to an Assistant Secretary of the Navy (Financial Management and Comptroller) web site, and may be submitted to an appropriate publication, such as the *Armed Forces Comptroller* magazine or the *Naval Institute Proceedings*.

The scholars each receive an etched plaque, a special mention in their fitness report and an additional qualification designation. Following the briefing with Bozin, the students were presented with the Conrad Scholar Award certificate and a congratulatory letter signed by Ashley D. Godwin, Acting Assistant Secretary of the Navy, Financial Management and Comptroller. At the end of the theses presentations, Bozin, Oliver, the NPS Conrad Committee and the Conrad Scholars dined in the Executive Dining Room.

Botkin briefed his thesis on "Applying Financial Portfolio Analysis to Government Program Portfolios."

Rysavy briefed on "The Statistical Analysis of Los Angeles Class OPTAR Expenditures Between Pacific Fleet Homeports."

Schang briefed on "Crossing the Technology Adoption Chasm in the Presence of Network Externalities; Implications for DoD."

Roum briefed on "The Nature of DoD Reprogramming."

Williams briefed on "Naval Aviation Enterprise AirSpeed; Cost Savings and Reinvestment for Recapitalization of Future Navy and Marine Corps."



(Left to right) Cmdr. Robert Williams, Lt. Joseph Rysavy, Lt. Chad Roum, NPS Conrad Chair retired Vice Adm. Thomas Hughes, Rear Adm. Bozin, NPS President retired Vice Adm. Daniel Oliver, Cmdr. Bradford Botkin and Lt. Suzanne Schang.



# Defense Analysis Department Dissects Issue of the “Long War”

By MCCS (AW/SW) Jacqueline Kiel

The “Long War” is the new term for the global war on terror, a conflict that has some experts comparing it to the Cold War. The term was used as early as 2004 when the Central Command Chief U.S. Army General John Abizaid used it to refer to the struggle against al-Qaida and other Islamic extremist groups. The term was also used in the 2006 Quadrennial Defense Review, the United States’ top-level reassessment of strategy.

But in reality, what is the “Long War?” That is a question that a top-notch, world-renowned journal has tried to answer by taking the unusual step of running a special issue on the subject using primarily people from one department of one military school as subject matter experts.

The British journal *Third World Quarterly* (TQW), a highly-respected British journal and a leading publication of policy and scholarship in the field of international studies, published its second issue of the year as a special issue on “The Long War – Insurgency, Counterinsurgency and Collapsing States.” The issue, Volume 28, Number 2 was published in March and contains no less than 11 Naval Postgraduate School faculty members, all from the Graduate School of Operational and Information Sciences’ Defense Analysis (DA) Department. They are Dr. John Arquilla, professor; Dr. Mark “Marcos” T. Berger, visiting professor; Dr. Douglas Borer, associate professor and associate Chair for instruction; Dr. Frank Giordano, professor; Lauren Harrison, research associate; Dr. Gordon McCormick, professor and chairman of the department, Dr. Glenn Robinson, associate professor; Dr. Hy Rothstein, senior lecturer; Dr. Kalev Sepp, assistant professor; Dr. Anna Simons, associate professor; and Dr. David Tucker, associate professor.

The term the long war conjures different connotations for different people. “A number of articles in this journal issue are critical of the idea of the long war and I think there are many good reasons for that criticism,” Arquilla said. “What it is as a phrase is the attempt to try to say the struggle against terrorism is like the Cold War which went on for 40 years. And I think the analogy, while probably appealing on some levels, is a very mistaken one. Forty years gave the Soviet Union time to unravel. Forty years would give the terrorists time to get on

their feet, so I don’t think time is so much on our side in this war, and that’s why I oppose the concept.”

The masterminds behind the project were Berger and Borer. While many of these special issues simply spring forth from the interests of the editors, this issue was one the duo came up with. “Professor Berger and I had the concept behind putting together a special issue of the journal on counterinsurgency and that, of course, is the main area of our expertise, along with defense analysis,” Borer explained. “What we recognize is there’s a lot of very high-level expertise in the DA Department that really is not represented anywhere else in the academic universe. We thought it would be useful to put quite a bit of that knowledge into one vessel. Professor Berger has had a long-standing working relationship with this journal, *Third World Quarterly*, so he was instrumental in proposing [the special issue].”

The two didn’t have any difficulties in gathering material for the special issue, considering all the expertise in the Defense Analysis Department. “The truth of the matter is in terms of this type of material we are the location of probably the greatest concentration of expertise on the subject matter on the planet.” Borer stated.

As a member of TQW’s editorial board Berger did have some concerns about contributors, because he had to convince the managing editor to approve a special issue that had upwards of half the writers, 11 of 17, coming from not just one department in one institution, but a department at the Naval Postgraduate School, which is seen by a lot of people on the outside as simply being a branch of the U.S. Navy. The question was one of not expecting too much criticism. “After being here for awhile, I assured him it wasn’t going to be a problem,” Berger said. “From what I’ve seen, people here say what they think and they are not unwilling to throw some fairly powerful criticism at the powers that be in Washington.

“We did bring in people from outside,” Berger continued. “[They] have quite different takes than my colleagues in the department, but the issues at stake are really important.”

Everybody came up with something they thought would be a good contribution. “We had a clear theme,” Rothstein explained. “The

project was obviously something that this department has a great deal of interest in and a great deal of expertise in.”

“It was not only doable but I had the sense that it was going to be very, very well done,” Sepp echoed. “And each of the stories would complement the other, but not overlap.”

The value of the special edition was quite apparent to the DA faculty. “From NPS’ point of view, it helps people outside of this community to understand that we have some incredibly talented people here who are trying to solve some of the real-world problems,” Borer explained.

“The Defense Analysis Department is dedicated to the notion that all the most difficult problems in security studies today are inherently cross-disciplinary in nature,” Arquilla explained. “Basically, we’re a department made up of people with specialties in many different areas who are drawn together by the complexity of problems.

“Hopefully this journal issue will become a book that will be used in graduate level instruction throughout the defense community, but hopefully also throughout academia, where they still engage in formal security studies,” Arquilla said. “There aren’t too many schools that do it very vigorously, but there are some, so we’d like to see this exploration of the subject of warfare in our time get a broader hearing throughout academia.”

“I think it could be used as a terrific reading in a course on the study of American military and war and diplomacy in the 21st century,” Sepp said.

In fact, the issue has garnered attention by other academics. Rothstein said U.C. Irvine is looking to make it a text “because of the diversity and richness of this one volume.”

**U.S. Marine Corps Staff Sgt. John P. Paterson scans a street while conducting security on a rooftop in Iraq, 2006.**





# COMING SOON! ALUMNI ONLINE

The *NPS website* will launch an interactive online network for alumni in December 2007. Our goal is to build stronger relationships by creating a personalized online experience for our alumni, fostering a sense of lifelong connectivity to NPS. The network will offer:

ALUMNI DIRECTORY

ALUMNI NEWS  
AND EVENTS

DISCUSSION GROUPS

EASE OF USE



Once the community is live, alumni can simply log on to the Online Alumni Directory at [www.nps.edu](http://www.nps.edu) and follow the link for “Create Your Online Directory Listing.”



NAVAL  
POSTGRADUATE  
SCHOOL



OFFICE OF INSTITUTIONAL ADVANCEMENT

MISSION

*NPS provides top-quality, relevant and unique advanced education and research programs to increase combat effectiveness of the Naval Service, other Armed Forces of the U.S., and our Partners, to enhance our National Security.*

[WWW.NPS.EDU](http://WWW.NPS.EDU)