



NAVAL POSTGRADUATE SCHOOL

UPDATE
NPS

SEPTEMBER 2012



U.S. Navy photo by Javier Chagoya

NPS Evaluates Biofuels for Fleet Power

By Amanda D. Stein

As the largest consumer of fuel in the United States, the Department of Defense has recognized the need to reduce its own dependence on foreign oil, and explore cheaper, safer alternatives. In support of those efforts, Secretary of the Navy Ray Mabus announced in 2009 a number of energy initiatives for the Navy, culminating in, among other things, a 50 percent reduction in petroleum-based fuel consumption in the fleet by 2020.

A team of researchers at the Naval Postgraduate School, in collaboration with various other research institutions, is applying their experience in combustion to help the Navy meet Mabus' goals.

NPS Mechanical and Aerospace Engineering (MAE) Associate Professor Dr. Christopher Brophy, and MAE Professor and Chairman Dr. Knox Millsaps, are working to help the Navy understand how alternative fuels will perform in existing gas turbine and diesel engines. The goal is to seamlessly transition to the biofuel blends without having to change any of the engines' components.

*“This research will not only greatly benefit the Navy but our entire nation ...
Supplementing our use of conventional fossil fuels with renewable fuels will
significantly increase our energy independence and energy security.”
– NOAA Lt j.g. John Petersen, MAE student*

“The Naval Postgraduate School's part in this is really helping with certification, to give the Navy confidence through fundamental measurements that the fuels look, smell and taste the same, so to speak,” Millsaps explained. “These fuels should have the form, fit and function to serve as direct drop-in replacements.”

The NPS team is testing the combustion of the alternatives to the Navy's current JP-5 and F-76 fuels — algae-based, hydro-reformed diesel, and camelina-based, hydro-reformed jet fuel blends. The 50/50 blends would incorporate half of the petroleum-based fuels currently being used, and half of either the algae or camelina fuels. The blending of the fuels will make the transition easier on the engines, and reduce the amount of petroleum-based fuels needed to run the fleet.

“This research will not only greatly benefit the Navy but our entire nation. About 60 percent of the oil used in the U.S. is imported. The Navy values energy as a strategic resource and it is fundamental for its mission,” NPS student, National Oceanic and Atmospheric Administration Corps Lt. j.g. John Petersen explained. “Supplementing our use of conventional fossil fuels with renewable fuels will significantly increase our energy independence and energy security.”

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A Message From ...

Naval Support Activity Monterey Commanding Officer, Capt. Gerral David



*Capt. Gerral David
NSA Monterey Commanding Officer*

Since the establishment of Naval Support Activity (NSA) Monterey, we've worked hard to improve communications with our tenants by reaching out to you, letting you know who we are and what we can do for you. The Customer Advisory Board has become much more robust as we share ongoing issues about our services with tenant command leadership and discuss your requirements versus our resource constraints. You can find information about us at www.cnic.navy.mil/Monterey if you are interested in more data.

As you have probably noticed, we've been pretty busy improving the facilities here. Some of the most significant projects include the construction of the Navy Research Lab's Marine Meteorological Center at the Annex. This project provides a new 15,000 square-foot, two-story command building that has met the standards for LEED Gold certification. Also, at the main campus site, we have completed a significant face lift inside the King Hall auditorium, totally revamped the Roman Plunge Pool, increased available permit and open parking spaces in a number of locations, and built new sidewalks throughout the Enclave area to enhance the walking campus. We re-designed the Sloat Ave. Gate to increase our force protection posture as well as to correct some safety issues with the previous gate configuration, and we completed large heating, ventilation and air conditioning projects in Glasgow and Halligan Halls to improve heat distribution and to save energy.

In September, we will finish the Herrmann Hall first floor project. This project is one of a series of projects to refurbish Herrmann Hall to better reflect the character of the original Hotel Del Monte while making it compatible with modern requirements. We elected to modify the public areas at the front of the building first because that is what most people see when they walk into the building. Our next project will include significant repairs to the outside of the building.

This is just the beginning ... With your help, NSA Monterey will continue to get better with our customer service and the prioritization of our limited resources. We are proud to be here and look forward with excitement to the future.

There are many projects on the horizon, including the Joint ISR (intelligence, surveillance and reconnaissance) and Cyber SCIF (Sensitive Compartmented Information Facility) expansion, opening a Starbucks in the library, softball field improvements, a new golf maintenance facility, Giant Voice Mass Notification System installation, Herrmann Hall elevator repairs, renovation of Watkins Hall, and several energy saving projects.

You might not know that NSA Monterey is responsible for the overall security and emergency management for the Navy in Monterey. We recently completed work on our Emergency Operations Center (EOC) located at the security building. In the event of a disaster or a force protection situation, the EOC will be our communications hub for the coordination of emergency services with external agencies as well as inside our fence lines.

Our quality of life efforts are paying off as well. The Navy Lodge just received the Edward E. Carlson Award (Large Category) — the best in the entire Navy. The Military Child Education Coalition recently presented the Pete Taylor Partnership of Excellence Award to the Monterey School District and Military Partnership in Education, and that award came with a grant to the school district.

This is just the beginning ... With your help, NSA Monterey will continue to get better with our customer service and the prioritization of our limited resources. We are proud to be here and look forward with excitement to the future. As I tell my NSA Monterey staff, "Work hard. Play hard. Take care of each other. Take care of the stuff (at work and at home). And do the right thing — the first time, every time!"

NPS Researchers Apply the Latest Battery Chemistries to Power the Fleet

By Kenneth A. Stewart

Students and faculty at the Naval Postgraduate School are planning to design and build a battery using technologies that have already been called a potential game-changer.

U.S. Army Capt. Andrew “Drew” Johannes of Stillwater, Okla., along with thesis advisors Assistant Professor Sebastian Osswald of the mechanical and aerospace engineering and physics departments, and Visiting Professor Joseph Farmer of Lawrence Livermore National Laboratory, have begun working on a semi-solid flow cell (SSFC) battery, which they believe has the potential to radically change the way the military powers everything from forward operating bases in Afghanistan to warships at sea.

“There are basic energy requirements for a base. The Army runs on generators, they are loud and they often run all night,” said Johannes. “What if you could have an energy storage mechanism where you could run generators during the day, but turn them off at night and still have power?”



U.S. Army Capt. Andrew “Drew” Johannes, a doctoral candidate at the Naval Postgraduate School, checks the voltage level of the semi-solid flow cell (SSFC) battery that he designed. (U.S. Navy photo by Kenneth A. Stewart)

The SSFC battery system in development could make this a clear advantage for forward operating bases allowing the bases to maintain a more tactical posture at night. Its implications to Navy ships are just as advantageous, allowing for efficient energy storage that can be used when needed to power critical ship systems.

What makes SSFC batteries work is a substance cleverly dubbed, “Cambridge

Crude,” because of its development by researchers at the Massachusetts Institute of Technology (MIT). Initially created at MIT utilizing lithium-based chemistry, the NPS team sought to utilize a similar concept, but based it on traditional, low-cost battery chemistries, such as the lead acid or nickel metal hydride found in the majority of batteries used today.

While giving credit to their colleagues at MIT, the NPS team is confident that the low-cost battery chemistries, like lead or nickel metal hydride, are excellent solutions for medium-to-large scale applications.

Beyond a new method of energy storage, SSFC technologies are also much more efficient as well, especially when the batteries are not in use.

Traditional lead acid batteries degrade over time because the lead and lead dioxide inside the battery are in contact with the electrolyte solution, Johannes says. When not in use, both electrode materials react with the electrolyte to form lead sulfate in what is called a self-discharge process. The consumed materials are then no longer able to produce electricity when needed.

SSFC batteries have the potential to overcome this problem by giving the engineer flexibility to separate these components.

“With an SSFC, you have access to

what’s inside the battery, they are not just these sealed boxes that you throw away after their cycle life is up. You can engineer your batteries so that you can get inside, separate the materials or add materials as needed,” said Johannes.

This separation of materials can extend the life of the battery and allow researchers to adjust levels to meet specific energy requirements.

from the
MEZZ

On Thursday, Aug. 2, the NPS President’s Advisory Committee held its latest meeting and luncheon at the Stanley House on the university campus. Comprised of senior academic and administrative leadership, the advisory committee provides a critical link in communication and collaboration on relevant issues in NPS governance.

In mid-August, Executive Vice President and Provost Dr. Leonard Ferrari traveled to the Washington, D.C. region for meetings on a number of ongoing initiatives. During the trip, Ferrari met with senior leadership of National Defense University’s Institute for National Strategic Studies, the Deputy Assistant Secretary of Defense for Reserve Affairs, and the President of National Intelligence University. Ferrari also got an update on several additional outreach efforts in the area with NPS National Capital Region Director retired Rear Adm. Moira Flanders.

NPS Vice President for Information Resources and Chief Information Officer Dr. Christine Haska welcomed U.S. Department of Defense Chief Information Officer Terri Takai to campus for a daylong visit and brief, Aug. 23. During the visit, Takai offered a presentation to university faculty, students and staff, discussing the importance of leveraging investments while at the same time encouraging innovation. As DOD’s senior information technology leader, Takai manages an annual budget of \$37 billion. Takai also congratulated the institution on its receipt of the Corporation for Educational Network Initiatives in California 2012 Innovations in Networking Award, and expressed an interest in learning more about how NPS can play a lead role in educating the future cyber workforce.

From the Mezz provides a brief report on the activities of NPS’ senior administration. For more details on any of these reports, please contact the Office of Institutional Advancement at pao@nps.edu.



Construction crews work on the Herrmann Hall first floor renovation project. (U.S. Navy photo by MC1 Leonardo Carillo)

University Facilities Benefit from Flagship Institution Status

IA Staff Report

It has been a busy year for contractors and builders on the Herrmann Hall first floor renovation project, and the work is steadily drawing to a close. From the Navy Gateway Inn and Suites main desk to the Executive Briefing Center, the renovations promise a new, more functional facility for students, staff, faculty and visitors. And the project is just one of many slated for the campus, thanks to the Chief of Naval Operations' (CNO) designation of NPS as a Navy flagship institution.

“Adm. Gary Roughead was a strong supporter of the Naval Postgraduate School,” said NPS President Dan Oliver. “During his time as Chief of Naval Operations, he did our institution a tremendous service by designating NPS as an Echelon 2 installation. In a time when budgets are extremely tight, our eligibility for these specific project funds allow us to make critical infrastructure improvements that would otherwise not be possible. What we are seeing now is the end result of the first special project which funded the Herrmann Hall interior renovation.”

Retired Rear Adm. Stephen Loeffler served as project manager on the renovation, and noted that momentum for these projects began when former CNO, and NPS graduate, retired Adm. Mike Mullen, committed to supporting NPS, and this continued support is a mark of the Navy's value of the institution.

“When Admiral Mike Mullen was Chief of Naval Operations, he made a commitment to President Oliver to help fund maintenance and improvements at the Naval Postgraduate School, along the same lines as improvements already completed at the Naval Academy and Naval

War College,” explained Loeffler. “These improvements are in recognition of our important missions in the Navy and DOD, and in support of our incredible, multinational body of faculty, students and alumni.”

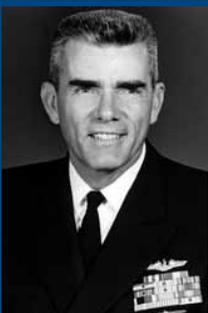
Naval Support Activity Monterey Commanding Officer Capt. Gerald David added that the improvements present opportunities beyond the traditional facilities maintenance, and help improve the look, safety and functionality of the campus.

“We are trying to get the right projects, the right bang for the buck, always, and we look forward to input from the faculty and staff on what those projects ought to be so that we can prioritize the future,” David noted.

Next in the queue are repairs to Herrmann Hall's exterior, improving the safety and function of the building. David explained the special Herrmann Hall project has required close consultation with the State Historic Preservation Office (SHPO) to maintain the integrity of the old Hotel Del Monte.

“In what will be the offices on the Herrmann Hall first floor, we opened that space up to the way it was originally, when it was the hotel's Gump's Department Store,” explained David. “The office walls are all reconfigurable partitions rather than permanent structures, which SHPO is happier with because you are not permanently changing the structure, and it's also better for the 21st century because the walls can be moved around to fit the mission requirement.”

NPS Honors Former University, Navy Leaders



Rear Adm. Robert McNitt passed away on Sunday, Aug. 12 — he was 97.

McNitt served as superintendent of the Naval Postgraduate School from 1967–1971. He is credited with inspiring many throughout his Navy career, including a high school student named Mike Mullen, who would become the first NPS alumnus to serve as Chairman of The Joint Chiefs of Staff, and acknowledged McNitt's role in his success during his induction speech into the NPS Hall of Fame.



Adm. James D. Watkins passed away on Thursday, July 26 — he was 85.

A 1958 mechanical engineering graduate of the Naval Postgraduate School, Watkins went on to become Chief of Naval Operations, Secretary of Energy, and later, a member of the university's Hall of Fame. His memory lives on in the halls of the Naval Postgraduate School, and in Watkins Hall, the building named in his honor.

Defense Analysis Grads Apply Their Studies Through Global SOF Internships

By Amanda D. Stein

In an effort to continue to bolster the program that United States Special Operations Command (USSOCOM) Commander Adm. William McRaven himself graduated from, the Naval Postgraduate School Department of Defense Analysis (DA) has found an exciting new way to expose recent graduates to strategic and operational special operations commands and network them back to academia.

In 2010, NPS SOCOM Chair and Common Operational Research Environment (CORE) Lab Co-Director U.S. Army Col. Greg Wilson decided to help Special Operations Forces (SOF) students make the most of their academics by placing them for one quarter, as interns, with various special operations commands to include forward deployed Special Operations Forces Command and Control Headquarters and with interagency partners.

“The DA special operations and irregular warfare master’s degree is the flagship program for educating SOCOM’s future leader-

ship. We saw an opportunity with guys who didn’t have to get right out to an operational assignment,” explained Wilson. “There is such a demand forward with all of our operational headquarters. It just became clear that we could push our graduates out there and develop this program to help scratch that itch, rather than having them disappear back into the formations while awaiting their key developmental jobs. We knew they might not have another opportunity to do something like this.”

With the most recent group of 15 interns deployed globally and networked back to the defense analysis department, the largest to date, Wilson is hopeful that the program will continue to grow, but still keep the element of exclusivity that makes the opportunity, and those selected, unique. As Wilson noted, the special operations and irregular warfare master’s degree program, followed by an internship opportunity, is a powerful combination in building SOCOM’s intellectual capital.

Sub Group Commander Breckenridge Visits Alma Mater

By MC1 Grant P. Ammon

Commander, Submarine Group 2 returned to his alma mater, Aug. 1–3, to deliver remarks to NPS undersea warfare students, and to strengthen the bond between the university and the operational submarine community.

Rear Adm. Rick Breckenridge, a 1989 graduate of NPS’ electrical engineering and acoustic engineering programs, returned to NPS to tour research laboratories and facilities, meet with key NPS faculty, and deliver two lectures to undersea warfare students, as part of the university’s Menneken Lecture series.

“For me, and in the undersea forces, we’re looking at a lot of new capabilities from the undersea domain and NPS is doing a lot of work in those fields,” noted Breckenridge during the visit. “If you’re not improving, you’re falling behind. We’re a Navy that is committed to constant improvement, and you only get that through education.”

Emphasizing the value NPS has to the operational fleet, he noted the partnership between the Navy and academia as a way to stay com-

petitive in today’s complex environment.

“Our Navy is a high-edge, technological service. We operate complex warships with sophisticated payloads that require more than just rudimentary canon knowledge,” noted Breckenridge. “As we develop greater capabilities from the sea, we do so, really, by leveraging our academic institutions. We need to know what things are going on in academia so we can pace ourselves and make sure we exact the maximum benefit out of that.”

The visit also strengthened partnerships between researchers at NPS and the operational fleet by allowing Breckenridge to share his perspectives and expectations of academia from a fleet commander’s perspective.

“It’s a two-way street, and the Naval Postgraduate School epitomizes that relationship with the operational fleet,” Breckenridge said. “The harder challenge is for academia to know what the fleet is doing so that they are able to focus their fields of research to service to the fleet.”



FACULTY news & notes

Graduate School of Business and Public Policy (GSBPP) Assistant Professor **Keenan D. Yoho** was announced as the recipient of the 2012 Richard W. Hamming Annual Faculty Award for Achievement in Teaching. Yoho was selected based on the following criteria for the Hamming award: outstanding teaching, excellence in thesis supervision, and strength of contribution to NPS students beyond the classroom.

Graduate School of Engineering and Applied Sciences Department of Meteorology Professor **Michael T. Montgomery** was recently conferred the title of Distinguished Professor, in recognition of exceptional and sustained scholarly accomplishments that have made, and continue to make, outstanding contributions to the NPS mission.

Defense Resource Management Institute Associate Professor **Eva Regnier** and Assistant Professor **Jay Simon** conducted a one-week Multi-Criteria Decision Making course in Heidelberg, Germany, from July 30–Aug. 3.

GSBPP Assistant Professor **Chon Wang** and Visiting Professor of Accounting **Joe San Miguel** received third place in the best paper award selection for the 5th International Public Procurement Conference for their paper, titled “The Excessive Profits of Defense Contractors: Evidence and Determinants.”

THIS MONTH ON INSIDE NPS

- Interview with Ray Buettner on Joint Interagency Field Explorations
- Collaborative research efforts between NPS and Lawrence Livermore National Laboratories on explosives and their effect on the warfighter
- A look at the thesis research of NPS student Lt. Deward “Luc” Cummings
- Latest research on unmanned aerial vehicle “Puma”
- NPS Spotlight — Distinguished Professor Nancy Haegel, Fulbright scholar award winner
- Memorial tribute to Adm. Robert McNitt and Adm. James Watkins

“INSIDE NPS” AIRS WEEKLY ON THE PENTAGON CHANNEL

NPS Student Team Analyzes Operational Utility of Future USVs

By MC1 Grant P. Ammon

Students of the Naval Postgraduate School's Systems Engineering Analysis curriculum have completed a study representing a first-order analysis of the unmanned surface vessel (USV) of the future. That USV concept, named Tailorable Remote Unmanned Combat Craft (TRUCC), is reliable, threat configurable, scalable, and leverages increasing autonomous technologies.

"TRUCC is a study on the viability and mission features associated with unmanned surface vehicle operations of the future," said Dr. Timothy Chung, who served as a faculty co-advisor on the project. "The way to think about TRUCC is a representation of the different characteristics that would be necessary for addressing the future threats that might engage our Navy and the unmanned surface vehicle requirements pertaining to it."

The research team, comprising 19 students from the U.S., Singapore and Israel, were given a broad mission statement to start their project, and developed a concept that demonstrated the best use of an unmanned surface vehicle.

"Our tasking was to design a family of unmanned surface vehicles that have a broad range of mission capability, to include intelligence, surveillance, and reconnaissance, anti-submarine warfare, logistics, counter-swarm, decoy and mine warfare," said Lt. Cmdr. Loren Jacobi, an NPS student that served as project manager for the research team. "The team was also tasked to produce a technology and capability roadmap to guide investment to reach the desired end state."

Although TRUCC is a conceptual project, students involved in the

research have developed the craft to meet a wide variety of real-world threats commonly encountered by today's naval forces and addresses probable threats of the future. Ultimately, the study suggests that the integration of unmanned surface vehicles such as TRUCC will serve as force multipliers that will allow traditional surface assets to conduct other critical missions.



NPS Systems Engineering Analysis student Lt. Cmdr. Loren Jacobi works on research for the Tailorable Remote Unmanned Combatant Craft (TRUCC) project on the NPS campus. (U.S. Navy photo by MC1 Grant P. Ammon)

"Selecting appropriate missions was crucial for the TRUCC analysis. USV characteristics are well suited to littoral missions, and this serves as a starting point for the integration with manned systems," said Jacobi. "Unmanned systems operating in the littorals can serve as force multipliers for manned systems by relieving some of the operational burden on large, multi-role manned capital ships."

By executing littoral missions, high-demand, low-density manned assets are free to conduct their blue water missions, Jacobi

continued. In addition, unmanned surface vehicles, such as the ones studied in the TRUCC project, would remove humans from peril and lower the Navy's operating cost.

According to Chung, projects like TRUCC that require such cross collaboration, is good for the NPS campus and enriches the student experience. "I think these types of projects that bring together not only students from across the campus, but faculty from across the campus, have an increasingly more important role in how we educate our students here," noted Chung. "I think there is incredible value in that, and I think the Navy can benefit immensely by looking at things in these holistic ways."

Focus On ... Military Hospitality

A Monthly Look at Names and Faces on Campus

The Navy Lodge located at La Mesa Village military community provides military hospitality to the Monterey area, and the person responsible for ensuring a pleasant stay for guests is General Manager Ron Rickow. October 1 will mark four years that Ron has been the general manager in Monterey.

The duties of a general manager are a bit of everything. Along with the primary duties of finances, utility costs, annual budget, maintenance of

the property and running the hotel business, Rickow assists in the various tasks that need to get done daily. He regularly rolls up his sleeves to fold towels, conduct housekeeping, man the front desk, paint and landscape. General managers are on call 24/7. The Navy Lodge Program has an extensive award program, and Navy Lodge Monterey was awarded the Carlson Award for 2011, which is a reflection on the performance of the staff, the lodge and the general manager.

"Interacting with the guests and staff is one of the best parts of the job," he remarked. "I've always had the hospitality in me, and being brought up in a military family opens up people's perspectives because of the experience that you get... The Navy Lodge general managers call on each other for advice and there is always someone that you can call. Networking is one of the biggest parts of this job — to build these businesses and operate them properly... We focus on all of the



Navy Lodge General Manager, Ron Rickow

military, but our first focus are the families permanently changing stations, and we take good care of them... The Navy Lodge program has made my life more interesting and it's been the best job I've ever had."

Any Day at NPS ...



The Naval Postgraduate School community gathered on Aug. 10 to pay their final respects to a man who committed his life to his family and country. Several hundred people, including his family and close friends, attended a memorial ceremony in honor of the late Capt. Alan "Dex" Poindexter, the university's Dean of Students and Executive Director of Programs. (U.S. Navy photo by Javier Chagoya)

Executive Director of Institutional Planning and Communications Dr. Fran Horvath, left, and Director of Media and Community Relations Alan Richmond, right, present NPS President Dan Oliver with the 2012 Business Excellence Award. The institution was honored with the award by the Monterey Peninsula Chamber of Commerce for outstanding contributions to the community in the education sector. (U.S. Navy photo by MCI Rob Rubio)



Cmdr. Joe Sullivan, Director of the Naval Postgraduate School's Modeling, Virtual Environments and Simulation (MOVES) Institute, addresses attendees of the 12th Annual MOVES Research and Education Seminar, July 31. The annual event looks to foster discussions about training and analysis products, education, and modeling and simulation in the domains of military, health care, homeland security, distributed learning and more. (U.S. Navy photo by MCI Leonardo Carrillo)



U.S. Cyber Command Director of Intelligence Rear Adm. Samuel J. Cox addresses attendees of the NPS Information Dominance Senior Leader Symposium, Aug. 9. Cox interacted with senior Navy leadership, offering an overview of his experience as an intelligence officer and stressing the importance of adaptability in an evolving military environment. He also addressed the importance of information dominance and how economic and manpower constraints are creating more challenges in the field. (U.S. Navy photo by MCI Leonardo Carrillo)



NPS President Dan Oliver is pictured with members of the university's Undersea Warfare Research Center and Information Technology and Communications Services — with Capt. T.W. Cramer, commander of the Naval Undersea Warfare Center (NUWC) Division Newport, on screen in the background — during the signing of a Memorandum of Agreement between NPS and the NUWC via video teleconference call, Aug. 13. (U.S. Navy photo by Javier Chagoya)

STUDENT voice

By Lt. Robert Kurrle
Chairman, President's
Student Council

Thank you for the e-mails and the feedback! A couple of updates since August:

Reps:

The department rep program is up and running, and nearly every department is now represented in the student council. As this network establishes itself and continues to build, student council will lean more on the reps for feedback from the student body. E-mail me if you don't know who your department representatives are.

New Committee:

Air Force Maj. Ray Erickson will be heading up a Philanthropy Committee. The goal of this committee is to give students a way to give back to the community. If you have any ideas or are interested in helping out, e-mail Ray at rrericks@nps.edu.

Other ways to get involved:

All members of the student body are encouraged and welcome to participate in the student council in a variety of ways — membership isn't limited to just department reps. Please e-mail your department rep or me for a list of current activities or projects. An inquiry on your part does not commit you to anything!

We want the student council to be the medium to launch projects and ideas, such as re-designing the check-in page, or starting a volunteer opportunity to give back to the community. This network will give students a voice, improve communication, and provide opportunities for more people to get involved with NPS. Talk to your department rep or e-mail me at rwkurrle@nps.edu to get involved.

Lt. Kurrle is the Chairman of the President's Student Council. Visit the PSC on the intranet at <http://intranet/psc/index.html>.

On Campus this Month

September 3
Labor Day

September 11
Summer Quarter Awards Ceremony
Barbara McNitt Ballroom

(U.S. Navy photo by Javier Chagoya)

September 17–20
NWDC/CRUSER Warfare Innovation Workshop
POC Lyla Englehorn, laengleh@nps.edu



September 21
Summer Graduation Ceremony, King Auditorium
POC Dean of Students' Office, Ext. 2291

(U.S. Navy photo by Javier Chagoya)

September 25
The Honorable Paul Stockton
Assistant Secretary of Defense for Homeland
Defense and Americas' Security Affairs
Secretary of the Navy Guest Lecture
POC Lt. Jenny Phillips, Ext. 2466



September 27
Guest Lecture with Arnold Kim
University of California, Merced Professor
"Optical Beam Propagation and Scattering in
Random Media"

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Historical Highlights

NPS established its Hall of Fame in 2001 and inducted the first two members in September of that year. The inductees were both alumni of Operations Research and both were service secretaries at the time — Secretary of the Army Thomas E. White (1974) and Secretary of the Air Force James G. Roche (1966). The two men are pictured below at an event luncheon with then U.S. Secretary of Defense, the Honorable Donald H. Rumsfeld.



From left, Thomas E. White, Gordon England, Donald H. Rumsfeld and James Roche. (Photo by Helene C. Stikkel)

The Hall of Fame induction ceremony took place in King Auditorium as part of the September commencement exercises, just weeks after the 9/11 attacks. White, who was keynote speaker for the commencement, noted, "Those of us whose thinking was shaped during the Cold War are in danger of missing the

obvious. As the whole world has changed, threats have changed. When threats change, our strategy must change. It is time to think anew."

Historical Highlights are provided by the Dudley Knox Library.