

# IN REVIEW

October 2008

NAVAL POSTGRADUATE SCHOOL



**MOVES:**  
**8th Annual**  
**Open House**



# PRESIDENT'S MESSAGE



Throughout our history, the Naval Postgraduate School has preserved an unwavering commitment to providing only the highest quality graduate education and relevant research. As part of that commitment, NPS maintains membership in, and is accredited by, the Western Association of Schools and Colleges (WASC).

Reviewed and recognized by the U.S. Department of Education, WASC was formed to promote the welfare, interests and development of education in the Western region. WASC's Accrediting Commission for Senior Colleges and Universities serves the public and its institutions by engaging them to examine their educational effectiveness, and fosters an

active interchange among public and independent institutions. NPS has been fully accredited since 1955.

NPS is actively involved in reaffirming this accreditation, a process conducted every 10 years. Since early 2006, the NPS WASC Steering Committee, comprised of faculty and staff from across campus, has met regularly to oversee the work on accreditation. The first document, an Institutional Proposal to, was approved by WASC on December 12, 2006. Through extensive internal and external analysis, including a campus-wide survey, we have developed three key themes that drive and focus our far-reaching review: Strategic Planning for the Next Centennial, Integrating a Campus-Wide Program of Improvement, and Supporting an Evolving Academic Enterprise.

Two task forces, led by Ms. Eleanor Uhlinger, University Librarian, and Dr. Doug Moses, Vice Provost for Academic Affairs, respectively, are actively engaged in the required self examinations defined by the accreditation process. The first of two required self-studies, the Capacity and Preparatory Review (CPR) report, requires NPS to thoroughly review, analyze and document its ability to successfully execute its mission. The focus is on the resources – fiscal, physical, technological, research, and human – that enable NPS to provide the finest graduate education.

Indeed a fruitful exercise, the Capacity and Preparatory Review self-study has reaffirmed my belief that NPS is fully prepared for the WASC reaccreditation process. Both NPS and our sponsor, the U.S. Navy, have made significant changes to and investments in the NPS organization and infrastructure support. The CPR draft was reviewed by the campus community and I have been impressed with the level of outreach to all constituents. The CPR is currently available on the NPS Intranet and I encourage you to take a look. The CPR will be presented to the Board of Advisors at their October meeting in Washington, DC.

The second of the required self-studies is the Educational Effectiveness Review (EER), a detailed and meticulous examination of our curricula and educational programs. In short, the EER determines if the learning objectives for our curricula are clearly and specifically established. In addition, it will ask us to provide evidence that our students truly are achieving the objectives we have set for them, and will ensure a process of continual review and improvement is effectively in place. An initial survey on Academic Practices and Policies, completed by each academic department, has already begun the data collection effort. The Educational Effectiveness Review will get into full swing next year upon final completion of the Capacity and Preparatory Review.

The WASC reaccreditation process is a substantial task, encompassing years of research and analysis, but the exercise will prove truly invaluable. Its basic premise of self-examination and continuous improvement is a complement to NPS's own culture. Not only does it reaffirm our commitment to providing the highest quality education available to our students, it will also prepare our organization to successfully achieve the goals outlined in our 2008 Strategic Plan, *Vision for a New Century*, ensuring our university warrants its global reputation for excellence as the Navy's graduate research university.

# IN REVIEW

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ON THE COVER: Lt. Sheldon Snyder uses an Augmented Reality Virtual At Sea Trainer, also known as AR-VAST. The AR-VAST uses in-place weapon systems as trainers in real-world environments with simulated enemy targets.

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Full versions of all articles are available at  
[www.nps.edu](http://www.nps.edu)

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# SOF Conference Held at NPS

By MC2 (SW) Corey Truax

The Naval Postgraduate School recently hosted a meeting of the Special Operations Forces (SOF) Education Council.

The Council comes together approximately three times a year to promote synergy between various military educational institutions concerning SOF-specific educational requirements. The meetings allow for discussion and often generate implementation recommendations about changes and/or additions to PME curricula to better prepare SOF students for the uncertain and highly complex operating environments they face around the world.


"This was the first time this conference has ever been held here at NPS," said Air Force Col. Brian Greenshields, NPS Special Operations Forces Chair. "It shows that the special operations community realizes that NPS is at the forefront of irregular warfare education."

Since its inception in 1992, the Department of Defense

Analysis' (DA) Special Operations Master's Degree Program, or SOMDP, has trained more than 550 officers to fill key staff and leadership positions in the Department of Defense.

It is this tradition of excellence that sets NPS apart from any other school and has drawn the continued support of SOCOM and its components.

"Currently the DA Department's special operations curriculum is the only graduate-level degree program in DoD sponsored and supported by SOCOM," explained Greenshields.

SOMDP gives students the opportunity to engage in activities that support the SOF community at large by playing key roles in efforts such as the Iraq Study Group, special seminars for the Office of Net Assessment, mobile training teams from the Joint Special Operations University and several projects sponsored by the geographic combatant commands. 

## Faculty Receive ASNE Award

By MC2 (SW) Corey Truax

Two NPS faculty members, Dr. Nita Lewis Miller and Capt. Robert Firehammer, were selected to receive the prestigious American Society of Naval Engineers (ASNE) "Jimmie" Hamilton Award for Best Paper of 2007 for their paper titled, "Avoiding a Second Hollow Force: The Case for Including Crew Endurance Factors in the Afloat Staffing Policies of the U.S. Navy."

Each year the ASNE Journal Committee awards the "Jimmie" Hamilton Award to the author or authors of the best original technical paper published in the Naval Engineers Journal during that year. The award has been presented annually since 1967 and selection is based on the "professionalism of the subject matter, depth of treatment, importance and lasting value, clarity of composition and style, and individual effort."

Miller, an NPS faculty member since 2000, is co-director of the Human Systems Integration (HSI) program and teaches human factors and human performance courses in the Operations Research Department. Firehammer recently retired from the Navy after serving as a faculty member in the Graduate School of Business and Public Policy, and currently works as an industry analyst and private consultant.

"It is NPS's independent loyalty to high academic and research standards that provides the Navy with an honest broker that provides Naval leaders with the foundation necessary to guide the Navy's strategic business decisions," said Firehammer.

## New Course Provides Valuable Insight on Student Opinions

By MC2 Kellie Arakawa

Naval Postgraduate School students in Prof. Ron Fricker's survey research course spent an entire quarter working together to answer a single overarching question: what do students at the midpoint of their academic careers think about their educational experience at NPS?


Survey Research Methods (OA4109) is offered within the Graduate School of Operational and Information Sciences and teaches students the basic principles of survey design and analysis. Because many NPS students conduct surveys for their final theses, the course was created to help them better understand survey research, including how to conduct good surveys, analyze survey data and interpret survey results. To help

students gain a more comprehensive understanding of survey research and analysis, the coursework also centers on an actual survey project.

For the most recent OA4109 class, students worked on developing a survey for resident and distance learning students who were at the midpoints of their academic careers. The survey topic was developed after the NPS Student Council identified a need for input from midpoint students and approached Dr. Fran Horvath, the Director of Institutional Planning and Communications, with a survey proposal. Having provided real-world research questions for OA4109 before, Horvath presented the student council's research needs to Fricker, who then implemented the survey project into the course curriculum.

The OA4109 team received survey responses from 488 resident students and 82 distributed-learning students who provided detailed information about their opinions of physical resources on campus, support services, teaching and learning, quality of life and school policies.

For NPS, the results of the course surveys are important, because the Western Association of Schools and Colleges (WASC), a regional association that accredits universities, wants to ensure the school has a feedback system that provides a foundation for improvement efforts, said Horvath.

"More importantly, the institution in its whole strategic planning process is really looking to be much more focused on enhancing our institution-wide, continuous improvement efforts," added Horvath. "President Oliver and Provost Ferrari have had a lot to do with this and are really focusing us on data-driven decisions so that we're utilizing feedback." 



# GCSC Holds 2nd Annual Consortium Directors Conference

By MC2 (SW) Corey Truax


The Global Center for Security Cooperation (GCSC) recently held its 2nd Annual Consortium Directors' Conference at the Naval Postgraduate School to facilitate communication and

resource sharing among Consortium members and identify developing issues in which the Global Center can provide assistance.

GCSC was formally established in October 2007 by the Principal Deputy Under Secretary of Defense for Policy, in response to the findings of the 2006 Quadrennial Defense Review. The review highlighted the need to substantially engage current and future foreign leaders, and called for a more effective and valuable application of Department of Defense International Education resources.

"In a nutshell, we wanted to build more of a network between the members, in which they could easily communicate with each other, rather than information flowing up to the Global Center for dissemination to the rest of the Consortium," said Warren Hoy, the Operations Officer for GCSC. "We wanted to build lines of direct communication between members, and I think we did a good job of that."

With all international outreach efforts being coordinated through the Defense Security Cooperation Agency (DSCA), the conference benefited immensely from the attendance of the DSCA Director, Vice Adm. Jeffrey Wieringa.

"Hearing his guidance in person was a great help to the Directors present, and gave us all a clear understanding of his vision in the world of international education," said Hoy. "He also sent a clear message that he values what we do by not only attending personally, but bringing his Principal Director for Strategy, Ms. Freda Lodge, and the Director of the Regional Centers Management Office, Mr. Jim McGaughey, with him." 



## Students Compete for MOVES Award


By MC2 (SW) Corey Truax

Two Naval Postgraduate School Modeling, Virtual Environments and Simulations (MOVES) students recently competed against each other only to both be awarded the George L. Phillips MOVES Award during the NPS pre-graduation awards ceremony.

This year's recipients were Marine Corps Maj. Eric S. Whittington and Lt. Ryan Alexander Rippeon.

The George L. Phillips MOVES Award is presented to the graduating MOVES student with the most well-rounded record while in the NPS MOVES program. This means the student whose excellent grades and outstanding thesis helped the most

in providing leadership and energy for the MOVES program, according to The MOVES Institute website.

Determination of the award is made by a small committee comprised of the MOVES Chairman, Academic Associate and the Curricular Officer. "The MOVES Institute is unlike other educational experiences I've encountered," said Whittington. "There is a unique blend of active-duty military and civilian academia. Ultimately, the civilian side benefits from being 'grounded' by the active-duty personnel, and the active-duty individuals are exposed to the rigorous standards of research." 

## GCSC Celebrates First Anniversary

By MC2 (SW) Corey Truax

Naval Postgraduate School faculty and staff recently filled the 4th floor of the Hermann Hall West Wing to join in celebrating the Global Center for Security Cooperation (GCSC) one-year anniversary.

The occasion boasted birthday cake, punch and many congratulations, and was led by speeches from NPS Provost Leonard Ferrari and retired Lt. Gen. Bob Ord, GCSC Director. Both expressed their approval of the Center's long list of accomplishments and their outlook for the future.

"I can't believe it's been a year," Ferrari said during a celebratory speech. "The Department of Defense has come up with a number of initiatives that deal with our international allies and partners and this Center has proven to be a standout place."

One highlight the Center celebrated was the growth it has seen in the past year. Formally instituted with only seven consortium members, GCSC expects to have as many as 20 members by fiscal year 2009, as it reaches out to institutions such as the Joint Special Operations University, Pacific Disaster Center, Inter-American Defense Board, National Defense University and others.

Ord attributed the year's successes to the people who comprise GCSC. "Those of you who were selected to start this Center a year ago – you really were specially selected to form and operate GCSC, and you all have done a magnificent job," said Ord. "We are going to hold true to our vision for this next year."

# NPS HOSTS INTERNATIONAL SECURITY CONFERENCE IN NATION'S CAPITAL

By MC2 Kellie Arakawa

With guidance from the *Cooperative Strategy for 21st Century Seapower*, a maritime strategy that stresses the importance of preventing wars as well as prevailing in them, Department of Defense leaders and international research representatives gathered at the 2008 Globalization and Maritime Security Conference in Washington, D.C., to examine critical globalization issues and international security challenges.

Jointly organized by the Temasek Defence Systems Institute (TDSI) Singapore, Lawrence Livermore National Laboratories and the Naval Postgraduate School, with participation by the U.S. Army Peacekeeping and Stability Operations Institute, the three-day workshop provided attendees with the opportunity to not only present their own research, but to actively discuss collaborative efforts to expand the relationship between the social and hard sciences in security and stabilization research.

"We're recognizing the compelling nature of the challenges we're facing from climate change, pandemic, the proliferation of weapons of mass destruction, economic inequalities ... one of the objectives of the conference was to create a forum for researchers to build collaborative relationships in order to address the kinds of challenges that no nation can solve alone," explained NPS Prof. Karen Guttieri, leader

for the NPS Security and Global Effects

(SAGE) Initiative and the program lead for the workshop. Additionally, the conference aimed to shift crisis awareness from a reactive to proactive mode and identify leadership competencies required of complex environments.

The workshop began each day in plenary, where participants engaged in presentations by policy, military and research program leaders to gain a variety of perspectives on maritime security in the global context.

**"We must adopt an approach that will build trust ..."**

Participants then attended either the globalization discussion track to focus on conflict prevention, globalization systems and leadership in complex environments, or the maritime security track, which was chaired by NPS Professors Tom Huynh and Don Brutzman, to discuss global maritime partnership, maritime security technologies and port security for the Straits of Malacca and Singapore. During the workshop's final session, participants assembled into small groups to focus on potential research needs and follow-on activities related to globalization, leadership and maritime security.

"We were all very familiar with the literature but what we wanted to do was have an even higher-level opportunity to interact directly and work," Guttieri explained.

Vice Chief of Naval Operations Adm. Patrick Walsh delivered the conference keynote speech, which focused on new security threats resulting from globalization and the guidance laid out in the new maritime strategy for creating stability and preventing future global conflict. Walsh emphasized the importance of developing cultural understandings of the regions in which the military operates, and

said that winning hearts and minds is key, "otherwise we are not part of the solution, we are part of the problem itself, and we will alienate locals and create insurgents faster than we can eliminate them." He also warned against naïve enthusiasm and pressure to deliver quick results, which can inadvertently help the very insurgency the U.S. is trying to defeat. "To win the long war, we must adopt an approach that will build trust," he said. "Those pay-offs take time and patience."

NPS President Dan Oliver echoed Walsh's sentiments by saying that globalization effects are of vital interest to the Navy, which is why it is so imperative for leaders and researchers to draw their resources and knowledge together to take those new insights and efforts beyond the three-day scope of the conference. NPS Provost Leonard Ferrari, who chaired the conference panel discussion on globalization systems, urged participants to explore ideas that would push globalization and security research forward. He said it was important for them to not only work on solving problems, but work on educating others to help facilitate programs and solve those problems as well.

As a result of the working groups and presentations, one of the revelations that surfaced for Guttieri was the need to rethink security and its approaches, which includes the use of research to inform policy and the integration of social, scientific and technical approaches. "As a scholar, working across disciplines is really rewarding," she said. "In terms of problem solving for the challenges the country confronts, it is very rewarding to get to work with system engineers, modelers, operations researchers and people from other disciplines, because when we combine and effectively communicate we really can enhance the global effort."



*Rear Adm. Lee Metcalf, Director of the Global Maritime Situational Awareness National Office (at the podium), discusses the organization's global maritime mission during a panel discussion with Maj. Gen. Herbert Althshuler of the U.S. Africa Command (seated left), State Department Senior Conflict Prevention Officer Cynthia Irmer and Naval Postgraduate School Prof. Frank Barrett at the 2008 Globalization and Maritime Security Conference*

## Former White House Chief of Staff Discusses

## Importance of NPS Mission



Alan Richmond (left) and Leon Panetta

By MC2 Kellie Arakawa

Leon Panetta, the Director of the Leon and Sylvia Panetta Institute for Public Policy at California State University Monterey Bay and a former White House Chief of Staff, highlighted the Naval Postgraduate School's contributions to both the nation and local community during the filming of the new NPS command brief.

"As a way to provide an overview of NPS's depth and history, the command brief is given to distinguished guests, visitors and media who want to gain a better understanding of who we are and what we do," said Alan Richmond, the

Director of Marketing and Community Relations.


"Leon Panetta was involved in the House of Representatives and served as Bill Clinton's Chief of Staff, so he has more of a national and international perspective of how NPS is positioned. He's been a long time supporter of NPS ... and he presents a global appreciation for what we do," Richmond added.

As a longtime resident of Monterey who was also born and raised in the area, Panetta said he has always felt a deep connection with the local military community. While in Congress, Panetta developed a close relationship with NPS and later became heavily involved in fighting for the school's presence during the Base Closure and Realignment process. He believes that NPS not only plays a significant role in improving the nation's security, but with its rich history and ties to the old Del Monte Hotel, is an important part of the Monterey Peninsula's culture, economy and legacy.

In his message, Panetta advised military officers to pursue an education at NPS, because unlike any other institution, it

provides the unique skills and knowledge they need to become highly trained leaders in an increasingly complex and rapidly changing world. NPS provides an unrivaled educational experience that is well worth the investment, and the school "will always have a reputation for being the premier educational facility in the military," he said.

Panetta also urged the local community to become more involved with the school and further emphasized the country's need for educated officers. He believes that NPS not only serves a critical role in the nation's defense mission, but is also an important investment for global peace, and advised the community to show its support for the school by forming a strong partnership with the NPS Foundation.

In the mid-1960s, Panetta served as an Army officer and said he always appreciated those leaders who understood the implications of their decisions. He believes that more than ever, the military needs officers who exercise good judgment and are educated in the complex challenges the nation is facing. One of the best things the country can do for its military officers is provide them with the kind of advanced education NPS offers, "because with good education, comes good judgment," he said. 

## DA Award

NPS President Dan Oliver presented the Distinguished Alumnus Award to Adm. Eric T. Olson, Commander United States Special Operations Command, who engaged students and staff at NPS during a Secretary of the Navy Guest Lecture in King Hall Sept. 4. Olson, who was awarded a Master of Arts in National Security Affairs from NPS in December 1985 is the first naval officer to command USSO-COM and is the first Navy SEAL to gain the rank of three- and four-star admiral, among many other accomplishments.



# Rebooting the 'Magic and Beauty' of Computing

By MC2 Kellie Arakawa

In the last several years, computer science departments across the country have been experiencing dramatic drops in undergraduate enrollments. According to Dr. Peter Denning, the Director of the Cebrowski Institute for Innovation and Information Superiority at the Naval Postgraduate School, enrollment rates have declined 50% since 2001 - even though job growth in the field has increased 10% annually. He firmly believes the public's negative image of computing has played a significant role in this trend.

To reconfigure this image and ignite new interest in the discipline, the Cebrowski Institute




Dr. Peter Denning in Glasgow Hall

has organized a diverse team of industry and academic professionals to design a three-day summit, "Rebooting Computing, The Magic and Beauty of Computer Science," scheduled for January 2009 at the Computer History Museum in Mountain View, Calif. By bringing together approximately 250 participants from around the world, the summit will explore ways to cultivate new ideas and projects that will move computer science forward. Denning, who chairs the design team, said he hopes it will help "recover the sense that working on computing is magical and beautiful, a sense we've somehow lost over the last two decades."

The summit will use the appreciative inquiry process, a method of discussion that brings together stakeholders from an entire system to generate positive outcomes and actions, explained Sue Higgins, the Deputy Director of the Cebrowski Institute. "As opposed to just looking at problems, what we're doing is creating shared aspirations of what we really care about and want to create to move something forward," she added. NPS Prof. Frank

Barrett, a pioneer of the appreciative inquiry process, will serve as the lead facilitator for the summit.

For Denning, one of the long-term objectives is to increase enrollments in computer science at both civilian institutions and NPS. He said the Department of Defense has expressed concern over the growing retirements of personnel with vital computer systems knowledge, and Higgins noted that the declining interest in computer science combined with the rising number of retirements could greatly impact national security.

"Here at NPS, we're about growing the next generation of national security leaders, so this [summit] is a very strong fit for us," she said. "We're mustering our expertise in bringing together technical and social networks to facilitate innovations, and this summit is a great opportunity for us to impact something as important as computer science, which is core to so many other facets of what we do throughout the national security arena and throughout the nation." 

## NPS Hosts Diverse Array of Speakers at LDESP Seminar

MCSN John Fischer

The Center for Civil-Military Relations Leadership Development & Education for Sustained Peace (LDESP) Program at NPS hosted a diverse group of keynote speakers for an educational pre-deployment seminar for the 48th Brigade Combat Team from Georgia in Glasgow Hall Aug. 27 - 28.

The lecturers covered: the history and culture of Afghanistan and its neighboring countries, the reconstruction of Afghanistan, civilian and non-governmental organizations operating within Afghanistan, anti-Afghanistan forces, and the pressures of ethical decision making during operations.

M. Ashraf Haidari, Political Counselor for The Embassy of Afghanistan in Washington D.C., opened the lectures with a discussion on security, governance and reconstruction from the Afghan government's perspective.

Father Mark Sargent, retired Major in the Canadian Armed Forces, currently the Bishop's Representative for Interfaith Matters for the London, On-

tario diocese, discussed the differences between Islamic culture and the home culture of the brigade. He opened the audience up to a more thought provoking exercise than just looking at charts and statistics.

Retired U.S. Ambassador Peter Tomsen, who served as President George H.W. Bush's Special Envoy to Afghanistan, gave the closing lecture. He provided insight as to how the brigade could take the knowledge and experience they had gained and forge a way ahead alongside the Afghan people. He emphasized the importance of results as opposed to promises in the eyes of the people.

"It's [LDESP] helping our young men and women who are going to Afghanistan to serve our country learn more about the environment, learn about this very different tribal society, and therefore succeed better and be safer," said Tomsen. "Whoever has the most resolve and courage, tenacity and wisdom, will come out on top. And I expect that we'll come out on top."

Retired Ambassador Peter Tomsen discusses "The Way Forward for Afghanistan" with senior leaders of the 48th Infantry Brigade Combat Team. Taking notes is COL Lee K. Durham, the brigade's Commanding Officer





# CSRS Offers Unique Educational Programs for Disaster Relief, Peacekeeping Practitioners

By MC2 Kellie Arakawa



Participants from the CSRS workshop, "Tools for Cross-Cultural Understanding," congregate at the Naval Postgraduate School's rose garden

With a signature teaching style that embraces collaborative group work and facilitated discussions, the Naval Postgraduate School Center for Stabilization and Reconstruction Studies (CSRS) is helping international disaster relief and peace-building practitioners strengthen their relationships with one another.

Established in September 2004, CSRS provides cross-community learning programs for the U.S. and international armed forces, government civilian agencies, nongovernmental organizations and intergovernmental organizations involved in international stability and relief efforts. Through workshops and conferences, the center explores issues within one of five central themes: maritime and naval issues, health and humanitarian affairs, practitioner skills and tools, economic recovery and institution building security sector reform.

"What we do in a learning environment is bring people from those communities together so they can understand each other and learn about other organizations," said Matthew Vaccaro, the CSRS Program Director. "Some of the biggest challenges of providing relief at the field-level happen because of misunderstandings and lack of relationships between the communities."

Vaccaro credited the center's

development to the vision of Rep. Sam Farr (D - Calif. 17th District), who recognized the need for an institution devoted to cross-community education for disaster relief and stabilization practitioners.

One of the distinguishing features of CSRS is that each community involved can find equal relevance in the program. During its developmental stages, CSRS consulted with prospective participants to identify learning needs and ensure each stakeholder would engage in the programs. What CSRS learned through those initial discussions was that many of the civilian organizations were hesitant to participate in a military-oriented conference and preferred a program that would incorporate the organizational perspectives of each community. This concept of an equally relevant cross-community education, which is used as a foundation for the CSRS program, is what truly makes the program unique, said Vaccaro.

## Future Programs

CSRS is currently planning two new programs that will debut later this year. In October, the center will introduce its new economic theme, "Creating Jobs and Rebuilding Livelihoods in Post-Conflict Situations," and in December, CSRS will host a large conference with a new conflict prevention theme focused on

the Arctic region.

Building off the military's new maritime strategy, *A Cooperative Strategy for 21st Century Seapower*, which stresses the importance of preventing wars and building partnerships, the CSRS Arctic conference will bring together a wide array of stakeholders to focus on the challenges, opportunities and potential political confrontation resulting from the climate changes occurring in the

Arctic region.

Also tentatively planned for the next year is a program on security sector reform, a follow-up workshop on "Disarmament, Demobilization and Reintegration," and a conference on civil-military coordination.

With the momentum it has gained over the last four years, Vaccaro believes that CSRS is becoming well-established as a relevant, high-quality teaching program. With new issues, crises and innovations that are constantly emerging, he explained that CSRS serves an important role, because there will always be a need for collaborative research and education.

"It's an ongoing requirement and we're never going to be finished," he said. "As long as the world remains a messy place as it seems to be, there will always be this need for cross-community learning programs." 🗣️

## Tools for Cross-Cultural Understanding

The Center for Stabilization and Reconstruction Studies (CSRS) runs approximately six to eight educational programs each year. "Tools for Cross-Cultural Understanding," a three-day international workshop, recently revisited issues related to cross-cultural learning and communications.

The initial interest in the topic grew out of needs expressed by past conference participants, who said the nature of their missions often took them to foreign countries where they struggled with communication and cultural barriers. Based on this feedback, CSRS developed a workshop to help participants understand how cultural influences shape thinking and behavior, and how to translate cultural differences and build successful relationships.

CSRS also used this conference to introduce a new learning tool to further engage each individual in the learning process. Participants were asked to organize themselves into groups of three and informally meet with their "learning groups" throughout each day to discuss how they might apply what they've learned to their work environments.

Ultimately, it is the responsibility of the participants to work on applying what they've learned to their missions; nobody else can do it for them, Vaccaro stated. CSRS' role is to help them apply what they've learned more concretely and provide a facilitated process so they can take the next step in utilizing the information. Without that process, the lessons learned "just get put in a mental drawer and never get accessed," he said.

# CCMR Hosts 'RESPONSES TO TERRORISM' CLASS

By MCSN John. Fischer

The Center for Civil-Military Relations (CCMR) at Naval Postgraduate School hosted an interactive 'Civil-Military Responses to Terrorism' seminar for international students in Monterey, Calif., between Sept. 8 and 19, 2008.

This class welcomed 33 participants from 27 countries, bringing the total number of participants to approximately 4,000 students from more than 120 countries for the last six years.

"When you tap into lots of different expertise and lots of different perspectives," explained retired Army Col. Timothy S. Heinemann, one of the CCMR faculty members, "then you really have a chance at having knowledge power. That's a magic combination. That's what it's going to take to defeat some of these adversaries. We have to out-think them. No one can do it alone."

The curriculum consisted of 17 instructional modules designed to promote group interactivity, three

case studies covering terrorist activities and preventive efforts, six-hour group exercise in three parts, and presentations by the participants to discuss their own home climates, issues and efforts.

"Everybody who comes to these courses has a different situation at home, a different set of opponents" said retired Navy Capt. Paul Shemella, now the CCMR Program Manager for the Combating Terrorism Fellowship Program. "The question is, what can they learn from each other?"

The approach combines academic theories with practical experience. A professor is seen as a colleague is holding a real discussion with the group, inviting the participants to share ideas and experiences.

Heinemann said one of the goals of the program is to foster a supportive network between the individuals in the class when they return to their home countries. To have them communicate laterally through the Internet as if they were still in the classroom is

the next evolution he said.

"It [CCMR's Response to Terrorism Project] mirrors, it's adaptive, like a terrorist network," Heinemann said. "It's not an accident that we're organized that way. It takes a network to beat a network - it takes a superior knowledge network."

"We partner with everyone we can," said Shemella. "We have a network, and I make that network available to others. We stay in touch, and we borrow from each other.

"Relationships are more im-

portant than events," Shemella said. "If you can establish relationships, and nurture them to the point where people trust each other, then you can get real collaboration."

Shemella summed up his vision of providing assistance to various countries around the world by saying that he believes no country is too large that it can do the whole job alone, but no country is so small that it can't make a significant contribution. 📷



(from left) Indonesian navy Col. Agus Heryana, retired Navy Capt. Paul Shemella, Indonesian army Lt. Col. Gumuruh Winardjatmiko and Indonesian air force Col. Adrian Wattimena

## CHSC Cuts Ribbon *By MC2(SW) Corey Truax*

The Naval Postgraduate School and its California Homeland Security Consortium (CHSC) partners rallied together in celebration of the much anticipated opening of the Monterey Bay Education, Science and Technology Center-based CHSC office July 1.



(from left) Deputy Director Office of University Programs Science and Technology Directorate Desiree D. Linson, Subcommittee member on Homeland Security Representative Sam Farr and NPS Prof. Tom Housel

CHSC which consists of NPS, community leaders, county first responders, city first responders, state agencies, federal agencies operating within the state, businesses, and local institutions such as University of California Santa Cruz, California State University Monterey Bay, Monterey Peninsula College, University of California Santa Barbara and Lawrence Livermore National Laboratory applauded and cheered as the ribbon was cut.

The CHSC Executive Director and NPS Professor Tom Housel kicked off the ceremony by welcoming and thanking everyone for taking the time to attend.

Housel highlighted the mission of CHSC by saying, "The consortium is really about transferring this technology, this education and industry to first responders and citizenry not just in Monterey Country but everywhere.

"Our entire purpose, our reason for life, is to serve the first responder community," said Housel. "Everyday we need to ask ourselves what we can do to help the first responders."

CHSC also aims to make available the lessons learned from all field technology demonstrations and experiments being done by the consortium open for public consumption. More so, they want the world to benefit from what is being done by "templating" the lessons learned in a form that will benefit all first responders who want to integrate the lessons learned into their daily operations. 📷

# Professor Publishes Politics of Space Security Book

By MC2(SW) Corey Truax

Professor Clay Moltz, a Naval Postgraduate School National Security Affairs department faculty member, is studying the implications of space becoming an increasingly crowded, and perhaps dangerous, place. To address these issues, he recently wrote a book, *The Politics of Space Security: Strategic Restraint and the Pursuit of National Interests* (Stanford University Press, 2008).

Moltz's book analyzes debates over military uses of space since 1957, particularly in an international context. It is the only comprehensive study cov-

ering the first 50 years of space security that also highlights the main trends in military space developments, their underlying causes, and the factors that are likely to influence their future course.

"It took me 20 years off and on to write this book," Moltz explained. In the meantime, he published numerous other volumes on Russia, North Korea, and nuclear proliferation issues, all areas in which he instructs at NPS. "My current book began with an interest sparked by my doctoral dissertation, which had focused on U.S. and Soviet




competition and cooperation in space. As time passed, it became a much bigger project."

At the time of his doctoral studies in the mid-1980s, Moltz didn't want to write what he called "another boring

dissertation on the roots of Soviet foreign policy." Instead, he decided that space was an area of superpower rivalry that was not receiving enough attention, but was going to become more important for future international security.

"At that time, studying space policy and politics was a very risky choice because it was so unconventional," said Moltz. "But I thought the topic would be interesting and useful to know about." But after the breakup of the Soviet Union, no one was interested in space competition, so he put his book plans aside. Eventually, however, it came back. Now, he says, "I'm very glad that I had something to work with, because space security has emerged as a central concern for militaries around the world, and especially the U.S."

In conducting his research, Moltz looked at the existing literature regarding the debate over military uses of space and noticed significant gaps that needed to be filled.

"Teaching in this field, I found that many of the books written on this subject were old," explained Moltz. "Nobody had written a study that had covered the whole 50 years of debates over the military use of space. I felt this was a contribution I could make to the literature and also to the field." 

## NPS's Track 2 Stabilizes U.S.-China Relations

By Barbara Honegger

For three years, the Naval Postgraduate School Center for Contemporary Conflict (CCC) has been quietly facilitating 'Track 2' diplomacy with the People's Republic of China, and the fruits of that effort have just been published in an anthology edited by the Center's co-director, NSA Assistant Prof. Christopher Twomey. The research arm of the Department of National Security Affairs, the Center hosts and co-organizes the forum for these informal discussions, U.S.-China Strategic Dialogue, whose third annual session was held in Hawaii last November.

The book, *Perspectives on Sino-American Strategic Nuclear Issues*, consists of papers by conference participants structured around paired national perspectives on contemporary nuclear issues. Half of the chapters are by U.S. nuclear policy makers and academic experts including NPS faculty members, and half by active duty and retired Chinese flag officers and academicians. Because the ongoing dialogues are held in an academic setting, they are considered a safe venue for frank and open discussions among potential rivals.

"Track 2 diplomacy is commonplace in international affairs and has played a constructive role in trying to resolve many ongoing or potential disputes, like the Oslo talks between Israel and the Palestinians," Twomey explained.

"The purpose of the ongoing talks is strategic nuclear threat reduction, stability enhancement and increased transparency between the U.S. and China, the two most important great

powers in Asia today," he said. "Increasing each side's understanding of the other's red lines, crisis dynamics and escalation potential can enhance security in a time of crisis, reduce proliferation of weapons of mass destruction and lead to greater stability."

"The Naval Postgraduate School is the perfect sponsor for this kind of informal diplomacy because we sit at the intersection of the Ivory Tower and the Washington Beltway," Twomey said. "As NPS faculty members, we get to do exciting work in both worlds."

The U.S.-China conference series grew out of Track 2s the Center has previously done with Russia and India. Founding CCC director Prof. Peter Lavoy is currently National Intelligence Officer for South Asia, which includes India, and NPS also has hosted Track 2s with Pakistan and Russia.

The bilateral dialogues and new anthology are sponsored by the U.S. Defense Threat Reduction Agency, Advanced Systems and Concepts Office, the lead agency for addressing threats from weapons of mass destruction, and other key U.S. agencies.

The Center for Contemporary Conflict analyzes current and emerging threats to U.S. national security and conveys its assessments through briefings, conferences, publications, the ship-board Regional Security Education Program and the e-journal *Strategic Insights*. For more information about the Center, go to [www.ccc.nps.navy.mil](http://www.ccc.nps.navy.mil).



# MOVE

## Holds 8th

The Naval Postgraduate School Modeling, Virtual Environments and Simulation (MOVES) Institute hosted prominent keynote speakers, discussed research in Modeling and Simulation (MS) being done and held demonstrations during their 8th Annual Open House and Research Summit July 15-17.

“The purpose of the open house was two fold,” explained



By MC2(SW) Corey Truax

# h Annual Open House

MOVES Director Cmdr. Joseph Sullivan. "One reason we held it was to showcase the research we are doing here so people can see what MS is about and how it can help them. The other reason is outreach to our sponsors and end users."

For the first time it was students who ran the 8th Annual Open House. This made it a very unique experience for those attending, and changed the shape of the Open House in many ways.

While all the participating MOVES students and staff played a huge role in the Open House, Marine Maj. Johnny Powers and Eric Whittington, played a substantial role in the execution of the event, according to Sullivan. The two students set up panel sessions to solicit end-user feedback, something essential to the MOVES Institutes continuing success.

"This is what we need and rely on in the MOVES Institute – feedback," said Sullivan. "The more feedback we are getting from users and our key stakeholders the better we can shape our work to fit what they need."

"The panel sessions were a change in venue," explained Powers. "Historically, the sessions were presentations that didn't provide much room for participant feedback. By changing how the event was organized, this year's participants were able to be part of the discussion and exchange ideas."

The students focused on getting the users of simulation, the simulation technologists and the simulation sponsors all in the same room.

"By bringing these three types of people together, real progress and vision for modeling and simulation could occur," said Whittington. "Once here, the participants needed to network and exchange ideas."

The feedback, in addition to participation from high-level MS experts from three different services yielded favorable results, according to Sullivan.

"This year was great because we had Mr. James Cook, the Army's Head of Modeling and Simulation, Mr. John Moore, a Navy representative, and Dr. George Akst, a high-level Marine Corps MS representative who were all able to attend and speak about what their services are doing with MS," Sullivan explained. "It was awesome to have them all there and they contributed to the event immensely."

With feedback streaming in from these three MS experts, in addition to other users and stakeholders, the MOVES Institute got an idea of how they are doing

"When it comes to strategic alignment we were looking very good," said Sullivan. "Our biggest issues are that there is a lot more work than there are workhorses. We just can not get enough people to meet the demands our stakeholders and users are asking of us."

The MOVES Institute, in addition to holding keynote addresses and having multiple training and research presentations, held a demonstration night.

One demonstration that was being shown was the Augmented Reality Virtual at Sea Trainer or AR-VAST. The goal of AR-VAST is to provide the Navy and Marine Corps with training capabilities to defend against small boat attacks and for operations in littoral environments.

"Training on crew-served weapons on coalition ships has not advanced to meet this new threat," according to Lt. Nate Conger's thesis abstract regarding AR-VAST. "The creation of a prototype Augmented Reality Virtual at Sea Trainer shows that emerging technologies in augmented reality systems can be used to create a low cost effective answer to this training need."

Children and adults alike tested their mettle against small boat attackers, firing round after round from a virtual full-size .50 cal machine gun, at the AR-VAST demonstration booth.

In addition to AR-VAST, people flew helicopters and strolled down the virtual streets of desert cities and urban environments, clutching a virtual M16 assault rifle and engaging assailants. The demonstration night boasted 20 such interactive displays for people to try out.

While many of these MS displays seem similar to displays that private industry creates, the MOVES Institute approaches their projects with a different perspective.

"Our focus is much different than private industry," Sullivan explained. "A lot of private industry creates solutions to problems that maybe don't relate to your organization. Then they tell you why you need their product. This creates solutions that are looking for problems. At MOVES, we focus on training value and we find problems that are hard and sometime frustrating to solve. We look at the science it takes to represent these problems and we figure out how to use them to our advantage with MS tools. We always make sure the science is there first."

# DISE Research Group

## Continued Success in Knowledge Management and Experimentation

By Sharon Prichard and Scott McKenzie

The Distributed Information Systems Experimentation (DISE) research group is a new name for a long-standing group of researchers at the Naval Postgraduate School. Directed by Dr. Shelley Gallup, DISE is uniquely positioned to provide the strength of knowledge required for in-depth experimentation and analysis of technology and tactics infusion to warfighting operations. DISE has 10 years of experience in knowledge management and large-scale experimentation. Trident Warrior (previously known as Fleet Battle Experiment) is an annual FORCENet Sea Trial experiment (sponsored by NETWARCOM) that relies heavily on DISE expertise.

TW is intended to provide "Speed to Capability" - a rapid fielding of improved FORCENet Command and Control warfighting capability to the fleet, with full supportability and maintainability, and supporting Tactics, Techniques & Procedures to best use this new capability to optimize execution of Naval operations. TW supports the Naval NETWAR FORCENet Enterprise Concept Development Process, examines the potential

of new technologies and processes with and among operational fleet and coalition users, accelerates fielding of SYSCOM-sponsored FORCENet capabilities and explores the art of the possible.

For Trident Warrior 2008, DISE analyzed 10 technologies grouped into 13 Focus Areas, each headed by a single Focus Area Lead. DISE Researchers met weekly with each Focus Area Lead, over a period of six months, to design a detailed experiment plan built around a set of unique objectives for each technology.


This year, the experiment was executed in the Pacific Ocean aboard several U.S. Navy ships including the USS Bonhomme Richard, the USS Comstock, USS Paul Hamilton, USS Milius, USS Rodney M. Davis, USS Port Royal, USS Blue Ridge, USS Reuben James and USS Chung Hoon. The experiment began in San Diego and included an at-sea period that concluded in Pearl Harbor, Hawaii.

TW08 Coalition experimentation has participation from seven nations: Australia, Canada, New Zealand, United Kingdom, France,

Chile, and the Republic of Korea. Australian participation is centered on HMAS ANZAC, while Canadian units include HMCS OTTAWA, HMCS REGINA and MARPAC Esquimalt. New Zealand units include the New Zealand MOC and JFHQ Wellington, HMNZS TE KAHA and Virtual Ships WAKA and KIWI. The United Kingdom manned the Virtual Ship DARING in Portsmouth. The French Navy's virtual ship participated from Toulon. The Chilean ship, CNS RIVEROS and the Republic of Korea ship KNS MUNMU also participated. All units and nodes established communications and network services utilizing CMFP CENTRIXS and Collaboration at Sea accounts.

Although full impact of TW08 experimentation will not be realized until the final analysis and Military Utility Assessment are complete, initial test results on the following technologies indicate that they are promising candidates for accelerated consideration:

- Integrated Shipboard Network System - Next Generation Technology (ISNS-NGT)
- TSw Hi-Speed Pier-side Connection - PMW-790
- Non Governmental Organizations - Non Classified Network (NGO-NCN) - PMW-160
- Hostile Forces Integrated Targeting Services (HITS) - PMW-120
- Enterprise Records Management Solution (ERMS) - Director of Naval Records
- Intelligent Agent Security Monitor (IASM) - PMW-160
- Maritime Automatic Super Track Reporting Systems (MASTER)
- EMIO Extended Capabilities Wireless Reachback Systems (WRBS) - PMW-160
- Command Post of the Future (CPOF) - US Army POR
- Aqua Quiet Interlude Processing System (AquaQuIPS) - PMW-120
- ISNS - Blackberry - PMW-160
- Secure Interoperability Data Interchange (SIDI) - Non POR
- Floating Area Network (FAN) - Non POR
- Spatially Aware Networks (SPAWN) - SSC SD

Input from NPS's DISE Research Group is used in major acquisition decisions every year. DISE has already begun working on next year's TW, which will be executed in the VACAPES OPAREA on the East Coast. 



# NPS Offers Assistance in Jordan's Revolutionary Plan to Fight Terrorism

By MC2 Kellie Arakawa



*New military recruits stand in formation while waiting for instructions at the women's training center.*

In an unprecedented effort to combat terrorism, the Kingdom of Jordan is training women to serve as intelligence, counterintelligence and special operations specialists within each of its armed forces.

The need for a strategic integration of women was driven by a national security crisis that occurred on Nov. 9, 2005, when Jordan's capital suffered a series of suicide bombings that killed and injured civilians in three hotel buildings. After learning that some of the terrorists involved were women, His Majesty King Abdullah II ordered each security institution to re-examine its counterterrorism capabilities.

King Abdullah also called upon his sister, Princess and Brig. Gen. Aisha bint al-Hussein, the head of Jordan's Directorate of Military Women's Affairs to take immediate steps to begin training women in support of the Jordanian Armed Forces (JAF) and its special security missions company. With bilateral discussions between the U.S. and Jordan underway, Princess Aisha, a Naval Postgraduate School alumna, passed on a request for U.S. planning assistance.

In response, Lt. Gen. Robert Ord, then Dean of the NPS School of International Graduate Studies and Richard Hoffman, the Director of the Center for Civil-Military Relations (CCMR), recommended retired Air Force Col. Suzanne Gehri, a lecturer for CCMR, to assist Princess Aisha with the planning process.

In March 2006, Gehri and Princess Aisha's team met to discuss the development of a 10-year, two-part strategy that would not only increase the number of female service members in the JAF, but expand the role of women officers and enlisted personnel in the recruitment, training, education and management processes, as well as create a regional center of excellence for women's military training.

While integrating women using a large-scale, systematic approach is a major institutional change for a Middle Eastern military, Gehri said the effort is not about women's rights. "It's about delivering a capability to the security forces that they don't have," she explained. "And no one's going to argue,

especially with the wave of female suicide bombers in the last year, that this isn't a big hole in everyone's defense."

Ord expressed the same sentiment and described the effort as "critical" to creating stability in the region. "It's more than just increasing the number of women in the Jordanian Armed Forces," he said. "It's about creating an opportunity for women in other countries to come to the Jordanian training center, and to learn how to maximize the immense potential that exists in the women of Middle Eastern countries."

Although the strategic integration is still in its beginning phases and overcoming some logistical challenges, the JAF has made significant strides and is receiving enormous support for the effort. "For a project that started in 2006, it's made incredible progress," said Gehri. "The U.S. took many years and women still aren't in special operations. But the Jordanian women are right there, because Princess Aisha was ready when that door cracked, and she jumped right through it." 🇺🇸

# Global Futures Forum: Monterey Strategy Seminar

By MCCS(AW/SW) Jacqueline S. Kiel

The Global Futures Forum and the Center for Contemporary Conflict at the Naval Postgraduate School sponsored and organized a Monterey Strategy Seminar, which took place at NPS Sept. 23-25.

Fifty participants from several countries, including Israel, Britain, Canada, and the U.S. discussed weapons of mass destruction, including the impact of science and technology on proliferation, non-state actors, and the view of proliferation from other countries. "It's really to do with the dynamics of proliferation of weapons of mass destruction," explained Dr. John Baylis, professor of Politics and International Relations and Pro-Vice-Chancellor at Swansea University, Wales, United Kingdom. "So what we're looking at sort of new areas of proliferation which are taking place."

"It's an effort to reach out to the broader academic community, both in the United States and really on the world stage," explained Dr. James J. Wirtz, Interim Dean of NPS's School of International Graduate Studies and Professor in the Department of National Security Affairs. "There are members from other academic communities from across the globe and even intelligence circles participate in the Global Futures Forum. This is actually an intelligence-community initiative to reach out to the broader academic community."

The Global Futures Partnership, which launched the Global Futures Forum (GFF), undertakes global outreach at an unclassified level for the intelligence community, including the Central Intelligence Agency. GFF was started 2005 as a multinational, multidisciplinary community. It is made up of intelligence, national security and nongovernment experts who discuss transnational threats in order to be able better understand and anticipate these threats.

Representing the Pentagon at the conference was Thomas G. Mahnken, the Deputy Assistant U.S. Secretary of Defense for Policy

Planning. He said, "One of Secretary [Robert] Gates' priorities has been to really build an intellectual capital for the Defense Department, to build bridges, build relationships, particularly with communities and individuals who haven't traditionally dealt with the Defense Department, so I see this as part of that larger effort to build communities of interest and establish relationships."

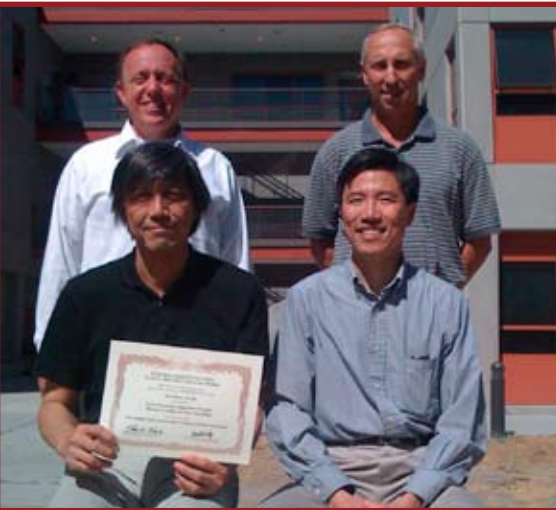
Dr. Michael O. Wheeler, who serves as Director of the Advanced Systems and Concepts Office, an in-house think tank for the Defense Threat Reduction Agency, mentioned one area of focus is on fissile materials. "A good part of the international community if focused on this issue of how do you keep fissile material from being misappropriated for weapons of mass destruction," he said.

With members from more than 35 countries, groups are now working together in specific topic-based areas of interest, some of which are terrorism and counterterrorism studies and environment and resource challenges.

"You bring these groups of academics and government experts into the room and it engages theory academics and government experts and allows that sort of transfer of information," Wirtz stated. "That's building the network. That's what it's all about, sort of an outreach program for internationals."

This is something that will continue, both here and abroad, so that solutions can eventually be found. "What you're looking for is the comprehensive solution that crosses the state and non-state and brings on the tools to play," Wheeler stated. "It looks at hard power, it looks at soft power, it has the international dimension to it and it's not the kind of thing that you have one conference and come away with a solution. This is a long-term process." 📧

## Software Engineering Faculty Win Award *By Barbara Honegger*



(back row) Professor James Bret Michael and Doron Drusinsky (front row) Thomas Otani and Associate Professor Man-Tak Shing

Four department of Computer Science faculty members won the best paper award at the Second IEEE International Conference on Secure System Integration and Reliability Improvement held in Yokohama, Japan, July 14-17.

Software Engineering Professors Doron Drusinsky, James Bret Michael, Thomas Otani and Man-Tak Shing received the award for their paper "Validating UML [Uniform Modeling Language] Statechart-based Assertions Libraries for Improved Reliability and Assurance."

"It's a great honor to be affirmed by our peers at an international conference attended by the world's top experts in the field," said Michael. "This award recognizes NPS Software Engineering as the leader in developing highly-automated independent software validation and verification (IV&V) methods and introducing them to the National Aeronautics and Space Administration [NASA]."

"The work for which we won the award is based on the strategic vision of Dr. Butch Caffall (Software Engineering M.S., 2003; Ph.D., 2005), one of our star alumni who now directs IV&V for NASA's Office of Safety and Mission Assurance, to introduce the automated software engineering methods we've developed at NPS to the highly complex software

systems used in our national space programs," said Drusinsky.

"Bravo Zulu to the great NPS faculty in computer science and software engineering, where my learning experience was the most important of my professional career," Caffall said when told of his mentors' award. "I work with many academics from many different universities, and the NPS faculty stands head and shoulders above them all. Without the knowledge I obtained from them, I wouldn't have had the skills and abilities to accomplish my mission as chief architect and technical director for the Ballistic Missile Defense System's command, control, battle management and communications or, now at NASA, to provide senior leadership with confidence that the software in the Space Shuttle, International Space Station, Hubble Telescope and future systems that will fly astronauts to the Moon and Mars meets mission objectives in a safe, dependable manner. Without doubt, the Naval Postgraduate School is a crown jewel of the Department of Defense." 📧



## NPS Hosts Homeland Security Conference *By Barbara Honegger*

The timing couldn't have been more perfect for the second annual American Institute of Aeronautics and Astronautics (AIAA) conference on "Homeland Security in Action" held at the Naval Postgraduate School, Aug. 26-29. Paggers beeped between sessions as top Department of Homeland Security (DHS) and other crisis/disaster management officials and first responders received urgent updates on hurricane Gustav as it bore down on the Louisiana coast.

Even the opening day presentation of a special AIAA commendation to the Department of Homeland Security itself seemed propitious, as if the society's Homeland Security Program Committee knew the agency's imminent response to Gustav would merit the award. Accepting the honor on behalf of DHS Secretary Michael Chertoff was the department's Assistant Secretary of Policy Stewart Baker.

"This conference is a place to share your strengths, ask for help and form the teams



(from left) Dr. Kevin Kremeyer and Assistant Secretary for Policy Stewart Baker

and relationships we'll need to further our common goal of protecting the homeland," conference chair and NPS graduate Jim Somers told more than 30 military, government and defense contractor leaders who develop and operate the air, space and maritime systems in support of U.S. homeland security and defense. "Some of the best and the brightest are here to collaborate and to see how each others' systems operate."

"This time, we'll be prepared [for Gustav]," said Robert Fenton, R&R Director for FEMA's Region 9 headquartered in Oakland, Calif. "We're prepositioning supplies and equipment and our incident-management teams have the latest technology, including data fusion decision aides, predictive modeling and real-time teleconferencing."

"With our response to Gustav we have a second chance [after Katrina] to get it right, and preparedness is the key," said David Reynolds, meteorologist in charge of the National Weather Service for the San Francisco Bay Area. "We need to make the connections now, and that's why conferences like this are so important."

"This symposium is very valuable and informative," said Lewis Leviticus, director of FEMA's National Response Coordination Center. "There are a lot of new contacts and information, which really helps with education, awareness and outreach."

## NPS Attends ONR S&T 2008 Conference *By MC2 Corey Truax*

Naval Postgraduate School representative recently attended the Office of Naval Research (ONR) Naval Science and Technology (S&T) Conference 2008, joining professionals from Department of Defense (DoD), private industry, small business and academia to look for possible opportunities for synergy and also work with ONR's principal S&T decision makers.

The conference kickoff was held at the Marriott Wardman Park hotel in Washington, D.C., Aug. 12. Rear Adm. William Landay III, Chief of Naval Research, welcomed attendees with a keynote address.

In his address, Landay stressed the importance of the conference. "This is about relevant research. This is about taking that great science that we discover, that great science that we're able to foster and turn that into capability in the hands of the warfighter, capability in the hands of the Navy and Marine Corps, in order to be able to support what they do.

"We are interested in tapping into all the science and technology we can find," said Landay. "Wherever the best stuff is, ONR wants to go get it."

Answering the invitation for the S&T event were 1,300 people, a number that more than doubled of attendees at last year's conference, and displayed the increasing need to make forward-looking investments in defense-related technologies.

"The conference brought together all the companies and DoD labs that

are partnering with ONR to push the S&T to the edge," explained Phillip Pace, a Professor in the Department of Electrical and Computer Engineering. "NPS presence at the conference was critical since ONR is a large sponsor for many NPS projects."

NPS influence in S&T was evident by the large number of active duty, retired and civilian NPS Alumni attending the conference.

"It was good and exciting to see so many alumni at the conference who were still interested in what NPS is doing," said Kari Miglaw, Director of NPS Alumni Relations. "It was a great opportunity to inform them of the online NPS Alumni Community and also let them know about the upcoming Centennial Celebration."



# COASTS Holds First S&T Symposium at NPS



U.S. and international military, government, industry and academic leaders convened at the Naval Postgraduate School Sept. 9-11 for the first Cooperative Operations and Applied Science and Technology Studies (COASTS) Science and Technology Symposium, focused on bringing the latest software and technology solutions to first responders, law enforcement and the services.

Now in its fifth year, COASTS is a low-cost cooperative NPS field experimentation program that engages international partners to develop and assess cutting-edge shared situational awareness technologies for military, crisis re-

sponse and law enforcement missions. It also provides companies with robust test beds for their new technologies, the opportunity to receive feedback from warfighters and the potential to transition their products to the armed forces.

"COASTS is one of the larger multinational military research and development field experiments based on open commercial technologies -- fully unclassified, sharable and releasable," said COASTS Director Prof. James Ehlert. "And I stress 'multinational.' The heart and soul of the program are our international partners, which is why we're holding this symposium at NPS, to take advantage of the

international students and international partnerships that are playing a greater and greater role in national security."

COASTS has expanded its partners from Thailand -- site of the first five years of its field experiments leading to a significant enhancement of U.S.-Thai military interoperability -- to additional countries, including Singapore, Australia and Greece.

"It was a dream for me to be at NPS," said conference attendee and NPS graduate Greek Navy Capt. Michael Papageorgiou (Electrical Engineering, 1992). "This school helped me tremendously in my career and made me think of the United States as my second country, which is a good thing for both of us. And now I'm back to explore additional ways that our nations can work cooperatively together. We're exploring holding joint COASTS field experiments in Greece."

One of the student presenters, Lt. Cmdr. Juan Gutierrez, recalled what brought him into the COASTS program. "An NPS graduate who'd participated in the 2006 experiment came on board my ship and said, when you get to NPS, this is one of the best ways to get hands-on experience with a systems integration approach to fusing cutting-edge military technology in harsh environments, and I jumped at the chance."

The thesis research of a former student, Hellenic Air Force Maj. Evangelos Foutzitzis, produced the Real-time Automated Position Identification System (RAPIDS), a sensor, data management, control and personnel monitoring system COASTS uses in field experiments to fuse inputs from a wide range of air-, land- and sea-based sensors into operationally robust 3-D laptop displays.


A highlight of the symposium was the keynote address by retired Air Force Gen. Charles Holland, former commander, Headquarters, U.S. Special Operations Command and former Vice Com-

*By Barbara Honegger*

mander of U.S. Air Forces Europe. Holland spoke on the importance of shared situational awareness and interoperability for multinational operations in the Global War on Terrorism.

"Jim Ehlert and COASTS are bringing the coalition partners together, and this is exactly what we need," Holland stressed. "The future is about joint, combined, interagency, coalition and commercial all working together. What's so important about COASTS is that you never know when you're going to need each other. Someday you're going to wake up and realize how important these opportunities to work together have been. I'm really grateful NPS has taken on these additional responsibilities to grow in international outreach."

Co-sponsors with NPS for the symposium were the Office of the Secretary of Defense, Rapid Reaction Technology Office, whose director for defense counter terrorism technology and former NPS Associate Provost for Strategic Development Nancy Ann Budden attended the conference; the Partnership for Defense Innovation; and AeroVironment, whose vice president for international business development, Ilker "Ike" Bayraktar, is also an NPS alumnus (Electrical Engineering, 1982).

"DoD's Rapid Reaction Technology Office is a sponsor of this symposium, because it's so important to quickly evolve capabilities to fill technology gaps," said Budden, whose current focus is supporting the special operations commands. "COASTS is a model of exactly how to accomplish that quickly and inexpensively using all-COTS [commercial off-the-shelf] technology and incorporating the warfighter that's achieved tremendous tangible results. One of its greatest benefits is being able to bring all these people together in an academic setting to facilitate international and interagency relationships and cooperation. The return on investment for the program and this conference have been incredible." 

# Unveiling

*(from the left) NPS Base Director Pete Dausen, Dean of the Graduate School of Business and Public Policy Robert Beck, Builder Chief (SCW) Charles Fury and retired Rear Adm. Merrill Ruck, Executive Director of the NPS Foundation, unveiled an armillary statue erected in the Quad to honor the Ingersoll family and all who served aboard the two USS Ingersolls, DD-653 and DD-990. The NPS Foundation worked with the USS Ingersoll Veterans Association to fund and place this statue, which adds to the Ingersoll museum exhibit that is located in the front of Ingersoll Hall. (Official U.S. Navy photo by MC2 Class (SW) Corey Truax)*



## Boeing Phantom Works Displays Cutting-Edge Technology

*By Barbara Honegger*

NPS faculty and students got to step into a time warp Aug. 7 as the Boeing Technology Exposition and Exchange transformed the gym into a display of hypersonic 'bat' planes, hydrogen-powered UAVs, directed energy systems and electromagnetic railguns. The exposition on the theme "Transitioning Technology into Capabilities for the Warfighter" was put on by Phantom Works, Boeing's advanced research and technology unit.

"Boeing considers the Naval Postgraduate School such an important source of collaborative research opportunities that it has made

NPS a key focus university and one of only four sites where we routinely hold these expos every two years," said Neal Ferguson, an airborne lasers expert who is the defense contractor's chief special projects engineer and its designated NPS liaison. "We work closely with Professor Knox Millsaps to build relationships with the officer students who will be DoD's future acquisition leaders."

"Expos such as this are increasingly important as national security is becoming so sophisticated that our partnerships with industry are at least as important as those we

have with other services and other countries," stressed NPS President Daniel Oliver at the NPS research showcase the evening before the expo.

"The Naval Postgraduate School was the best thing I ever did in my Navy career," said John Hearing, a renowned graduate (Space Systems Operations, 1991) who created Challenge Athena, the Navy's commercial-satellite-based ship communications system, for his master's thesis and now manages advanced anti-submarine warfare and tactical unmanned aircraft systems for the company.

The star alumnus returned to talk about Scan Eagle, a tactical intel support UAV that's the focus of a collaborative research project.

"John's the perfect [NPS] student whose research made a major impact on operational capabilities," said Paul Bloch, Hearing's former NPS thesis advisor and also an alumnus (Operations Research, 1975) now with Boeing's Modeling and Simulation Requirements Division.

"These expos are invaluable to get feedback from our future Navy leaders," said Don Winter, Boeing's Vice President for Engineering and Information Technology. "NPS is one-stop shopping for us -- a strong cross section of the Navy and DoD technology community -- to get a great return on investment. We look forward to being back in 2010."



## Navy's Personnel Head Rallies 347 at Summer 2008 Graduation Ceremonies

Assistant Secretary of the Navy for Manpower and Reserve Affairs Anita Blair called on 347 U.S. and international officers and Department of Defense civilians to use their world-class education to advance the Navy and the nation at Summer 2008 graduation ceremonies in King Hall, Sept. 26.

Crossing the stage were 209 U.S. officer students, including 136 from the Navy, 27 Marine Corps, 29 Air Force, 12 Army, three Navy Reserve, two Army Reserve, 120 DoD civilians and 18 international officer students. The degrees awarded were three Ph.D.s, 241 Master of Science, 73 Master of Arts, 41 Executive Master of Business Administration, three Master of Business Administration and 14 dual degrees. Seventy-eight U.S. officers also earned their Naval Command and Staff diploma in Joint Professional Military Education, Phase I, from the Naval War College, which has a satellite campus at NPS.

"If there were a *U.S. News and World Report* list of the top hard-working schools, the Naval Postgraduate School would be right up there," said Blair, whom President Daniel

Oliver introduced as a strong champion of graduate education and a long-time friend of the Naval Postgraduate School. "The faculty and staff have done their part to provide you with a unique, world class opportunity in research and education to enable you to fulfill your role. The rest is up to you."

Blair lauded NPS as a sterling example of educating for innovation and teaching students to think "outside the box."

"We train to replicate, but we educate to innovate," she said. "Since 9/11, we've faced an enemy that's unconstrained by the rule of law or even human decency, so now more than ever we need your ideas and your energy, because it's through innovation that we'll be able to defend against, and stay ahead of, this threat. But there are challenges. We're fighting an Information Age war with an Industrial Age management system, especially in the area of information technology. I sincerely support the Naval Postgraduate School in its efforts to realize the revolutionary vision of bringing the best the Information Age has to offer to the Department of Defense.


"Since 9/11, we've also fielded a total force of military and civilian assets," Blair added. "I look out in this auditorium and I see that total force in front of me. Thank you to all of you for your commitment to our nation."

"You should be justly proud of everything you've accomplished here," Oliver rallied the grads, "and we look forward to calling you alumni."

Marine Corps Col. Brian Mace, command information officer for Marine Corps Forces Pacific in Hawaii, was at the Naval Postgraduate School to explore opportunities to partner with faculty and students in developing decision support aids. "I happened to be here during graduation, so [Senior Marine Corps Representative] Lt. Col. [Carl] Oros asked me to be on stage as the Marine Corps service representative for the ceremony," Mace said. "It was truly a great honor to shake the hand of every Marine Corps officer who received their diploma."

"Every METOC officer comes to NPS at some time in their naval career, and now that I've been here I can say it's a really great career milestone," said meteorology and physical oceanography graduate Lt. Cmdr. Erick Edwards at the reception following the ceremony. "It's a very, very thorough program, a great opportunity and a great all-round tour."

"At NPS, you gain a deep insight into the culture of the U.S., as well as of the many other nations who send their officers here," added new computer science alumnus German Navy Lt. Dietmar Teufel. "And this is now more important than ever, because the higher in rank you go, and especially if you serve in NATO or with coalition forces, you have to work with the militaries from many nations."

Aerospace engineering duty officer and pilot Lt. Cmdr. Sam Messer earned a joint master's degree in computer science and space systems operations. "I wouldn't hesitate to tell fellow officers considering coming here to definitely do it," he said. "Not only do you get a good education at NPS, you get a lot of practical applications to the military. I'm fortunate in that I'll get to apply that knowledge immediately, because I'm going to work in space systems at the Advanced Science and Technology Directorate at NRO [the National Reconnaissance Office]. With what I've learned here, it's going to be awesome." 



*Assistant Secretary of the Navy for Manpower and Reserve Affairs Anita Blair*

# Bronze Star Winner, Faculty and Students Hailed at Summer Awards Ceremony

By Barbara Honegger

The Naval Postgraduate School recognized a Bronze Star winner, 33 students and four faculty members for outstanding academic and instructional achievement at the university's Summer Quarter 2008 Awards Ceremony, Sept. 16.

The ceremony, officiated by Dean of Students Capt. Kathryn Hobbs, recognizes the highest levels of achievement in academics, instruction, research and community service.

Before a sea of students in King Hall in summer whites, NPS President Daniel Oliver presented the Bronze Star to Cmdr. Douglas Burton for meritorious achievement in connection with combat operations while serving as lead applied systems analyst for II Marine Expeditionary Force (Forward) Science and Technology Section in support of Operation Iraqi Freedom.

"This was completely unexpected and such a great honor that I'm almost speechless," said Burton as he celebrated with his family after the ceremony. "Everything I did was for the young soldiers, Sailors, Marines, who are the reason that good things happen in Iraq. They were my driving force and I can't say enough about them. I like to think that perhaps what I did saved a few lives, and that's the most important thing."

The Monterey Council Navy League Award for Highest Academic Achievement went to triple award winner Lt. Adam J. Thomas, who also received the Chief of Naval Operations Undersea Warfare Award and Chief of Naval Operations Award for Excellence in Operations Research.

Air Force Maj. Gerard G. Gleckel also received three honors: the Naval Postgradu-

ate School Outstanding Academic Achievement Award for Department of Defense Student, Air Force Association Award for Outstanding U.S. Air Force Student and Space Systems Operations Award for Academic Excellence.

Four NPS faculty members were recognized for outstanding teaching. Electrical and Computer Engineering (ECE) Prof. Ralph Clark Robertson received the prestigious Richard W. Hamming Award for Excellence in Graduate Teaching; Systems Engineering Lecturers Greg Miller and Gary Langford won the Meyer Award for Teaching Excellence in Systems Engineering (Distance Learning); and Assistant Prof. James Airola received the Lieutenant Commander David L. Williams Outstanding Professor Award.

## Full List of Student Awardees

In addition to Gleckel's, Thomas' and Dea's awards, Summer 2008 graduating class students recognized for their outstanding achievement were:

Gary Kildall Award for Computing Innovation – Lt. Paige H. Adams

Outstanding United States Air Force Graduate Award, Department of National Security Affairs -

Air Force Maj. Justin A. LeMire

Northrop Grumman Student Award for Excellence in Systems Engineering and Analysis –

Lt. Cmdr. Michael Erickson and Lt. Cmdr. Cinda Brown

Naval Postgraduate School Outstanding Academic Achievement Award for International Students – Hellenic Navy Lt. Dimitrios Lekkakos

Monterey Kiwanis Club Outstanding International Student Award – Hellenic Navy Lt. Dimitrios Lekkakos

Naval Postgraduate School Superior Service Award – Marine Corps Maj. Brian C. Anderson

Marine Corps Association Superior Service Award for Outstanding U.S. Marine Student – Marine Corps Maj. Eric S.

Whittington

Commander George L. Phillips Modeling, Virtual Environments, and Simulation – Marine Corps Maj. Eric S. Whittington

Association of the United States Army, General Joseph W. Stilwell Chapter, Award for Outstanding Army Student – Army Maj. Jeffrey C. Kacala

Surface Navy Association's Award for Excellence in Surface Warfare Research – Lt. Chad Kaiser

Military Operations Research Society Stephen A. Tisdale Graduate Research Award – Lt. Chad Kaiser

Chief of Naval Operations Information Warfare Award – Lt. Patrick Kistner

Rear Admiral Grace Murray Hopper Computer Science Award – Marine Corps Capt. Byron Richard Harder

Rear Admiral Grace Murray Hopper Information Technology Management Award - Marine Corps Lt. Col. Timothy L. Clarke

Commander George L. Phillips Modeling, Virtual Environments, and Simulation – Lt. Ryan Alexander Rippeon

Space and Naval Warfare Sys-

tems Command Award in Electronic Systems Engineering – Lt. David McGlone

Graduate School of Business and Public Policy Faculty Outstanding International Student Award –

Turkish Navy Lt. j.g. Necati Ertekin

Louis D. Liskin Award for Excellence in Regional Security Studies – Lt. Cmdr. James A. McMullin

Hans Jones Award for Excellence in Thesis Research in Special Operations and Irregular Warfare or Security, Stabilization, Transition and Reconstruction – Lt. Cmdr. Chad G. Wahlin

Awards presented in absentia, to students who have detached for duty:

Naval Undersea Warfare Center Division Newport Award for Excellence in Undersea Warfare Technology – Lt. Christopher Lee Bryan

Submarine Force Award for Excellence in Undersea Warfare – Lt. William Harley

Admiral William Adger Mofgett Space Systems Award - Lt. Cmdr. Gregory Fitzgearld

Meyer Award for Outstanding Student in Systems Engineering (Distance Learning) – Justin D. Loy and Denise L. Turso

Army Acquisition Corps Award for Scholastic Achievement - Deidre Townes, Department of the Army

Commander Philip A. Murphy-Sweet Memorial Award for Excellence in Acquisition – Paul T. Dube, Department of the Navy

Rear Admiral Thomas R. McClellan Award for Academic Excellence in the Graduate School of Business and Public Policy – Cmdr. William G. Mager

Space Systems Operations Award for Academic Excellence in the Distributed Learning Degree Program – Jeffrey M. Nelson, U.S. Marine Corps Headquarters

The Curtis H. "Butch" Straub Achievement Award – William Crosbie, National Railroad Passenger Corporation (Amtrak)

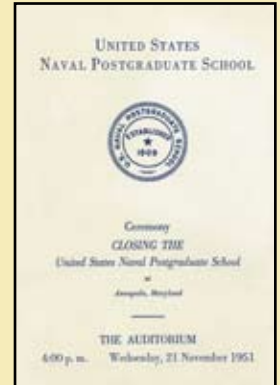
Zimbaro Award for Graduates of Master in Arts National Security Studies (Homeland Defense and Security) Department of National Security Affairs – Keith Ludwick, Federal Bureau of Investigation

# We Are Approaching 100

## NPS History In Review



The Navy's first formal advanced education program, and predecessor of today's Naval Postgraduate School, was the School of Marine Engineering at Annapolis. Established by a Secretary of the Navy General Order in 1909, this program was expanded and renamed the Postgraduate Department of the Naval Academy in 1912 and later redesignated the Naval Postgraduate School in 1919.

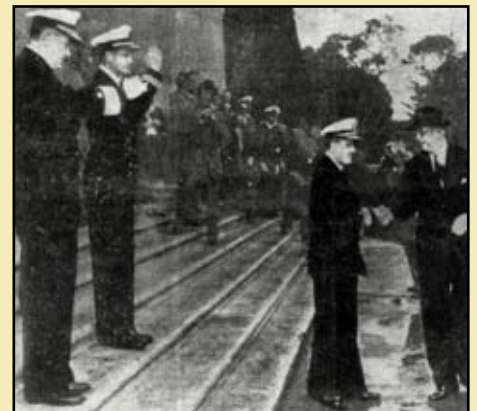


The Naval Postgraduate School officially closed its doors at the Annapolis campus in November 1951 and began the final stage of its relocation to Monterey. Technicians disassembled radars and large wind tunnels and loaded these into boxcars with heavy machinery, lab test equipment, office furniture and thousands of books. NPS shipped approximately three million pounds of gear by rail, truck and air and nearly 500 students, faculty and military and civilian staff made the cross-country move with their household goods. The formal dedication ceremony for NPS Monterey was subsequently held in February 1952.



On Dec. 5, 1951, the Secretary of the Navy sent a bulletin to all ships and stations to announce the move of NPS from Annapolis to Monterey. There were 980 active warships in the U.S. fleet and the institution's formal name was United States Naval Postgraduate School. The seal shown above appeared very briefly on a few NPS publications around this time period. The origins of the logo's design and its quick demise are an undocumented mystery.

Following a cross-country, 3,000-mile move involving three million pounds of gear – from wind tunnels and thousands of books to office and classroom furniture and delicate lab instruments – the Naval Postgraduate School held a formal dedication ceremony of NPS-Monterey on Feb. 16, 1952. Secretary of the Navy Dan Kimball and Fleet Admiral Chester Nimitz were among the dignitaries and speakers for the ceremonies. At right, SECNAV Dan Kimball greets Rear Adm. Earnest E. Herrmann, NPS Superintendent in 1952.



On March 20, 1944 – more than 13 months before victory in Europe and 17 months before victory in Japan – Vice Admiral William Pye, president of the Naval War College, convened a Navy Department board to plan for post-war growth of the Naval Postgraduate School. There were six voting members on the board – four admirals, one Marine Corps general and the president of Northwestern University. The board's recommendations led to the subsequent purchase of the Hotel Del Monte in Monterey and the post-war move of NPS from Annapolis. At left, Vice Adm. William Pye 1942.

*Historical Highlights are provided by the Dudley Knox Library*

# May

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Wednesday

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Saturday

Sunday

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*Save The Date!!!  
It's the event of the century*

**Join us as we celebrate the centennial of the Naval Postgraduate School, May 22-25, 2009**

Reconnect with NPS. Get together with old friends and meet new ones. Bring your family. Events include a golf tournament, an evening gala, an exhibition on NPS history at Monterey's Maritime Museum, and Memorial Day Concert on the lawn.

A schedule of events will be announced in early 2009. Watch your mail for details, or go to [www.nps.edu/alumni/](http://www.nps.edu/alumni/) for updates.

**Info: 831-656 2077  
alumni@nps.edu**





# NAVAL POSTGRADUATE SCHOOL



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### MISSION

*NPS provides high-quality, relevant and unique advanced education and research programs that increase the combat effectiveness of the Naval Services, other Armed Forces of the U.S. and our partners, to enhance our national security.*

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