

Technology Workshop Supports CNO's Unified Maritime Strategy

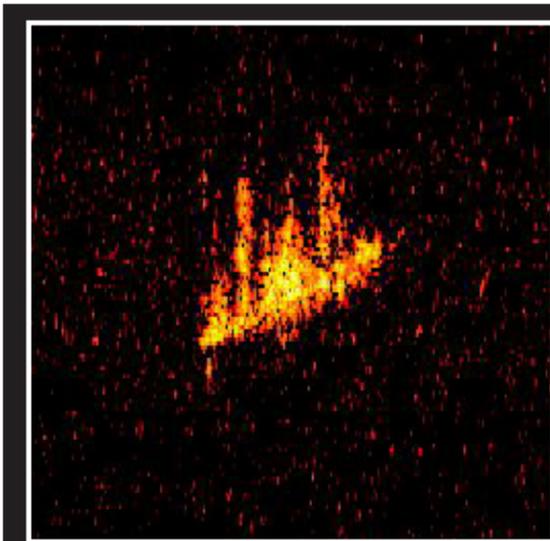
By Dr. Phillip Pace

In announcing the new unified maritime strategy in October, Chief of Naval Operations Admiral Gary Roughead noted that the strategy "codifies longstanding challenges and reflects a commitment by the maritime services to work cooperatively with friends, partners and allies to realize a shared vision of mutual security, stability and prosperity."

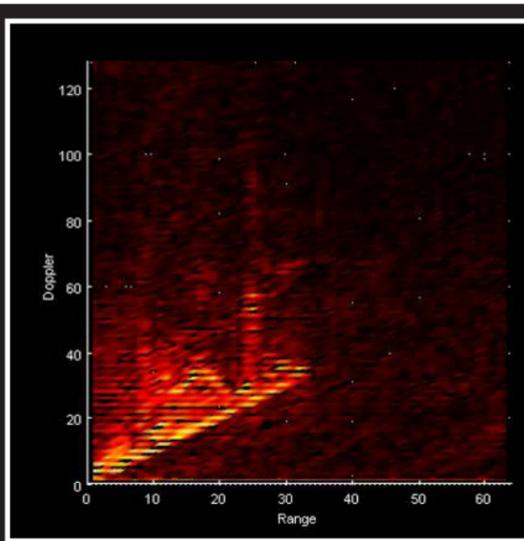
The Electrical & Computer Engineering Department has been engaged in coalition building for several years through both resident graduate education programs for international officers and specialized technical short courses for partner nations. One initiative that has been especially successful is the Technology for Information Operations (TIO) international workshop.

The concept for the three-week long TIO workshop has evolved significantly since our first meetings in early 1996 with Swedish officials. The inaugural course was designed and approved within months and was presented to twelve officers from the Swedish National Defence College (SNDC). Called the SNDC Advanced Technical Course, this initial two-week long workshop focused on information and electronic warfare technology and was completed on Nov. 1, 1996.

The workshop was highly coordinated with Swedish military leaders and the NPS International Programs Office which has played an ongoing and invaluable role in the coordination with the Department of Defense. NPS



Inverse synthetic aperture radar (ISAR), a technology used for target acquisition, is one of the electronic warfare topics covered in the annual TIO workshop. An actual ISAR image of a U.S. Navy ship is shown on the left along with its corresponding false target image on the right, which can be created by an expendable remotely piloted vehicle using a chip designed by NPS researchers.



faculty members were chosen for their subject matter expertise to cover technology topics of specific interest to the Swedish military. Since its introduction, NPS has offered a tailored course annually with the exception of 2005-2006 when the Swedish Armed Forces underwent restructuring.

The 2007 Technologies for Information Operations workshop included decision modeling and tactical analysis as an introduction to special methodologies of command and control. The course topics ranged from high-speed networking to cruise missile technologies, synthetic aperture radar image compression techniques, ultra wideband impulse methods and other relevant technical issues.

The NPS technology workshops have helped the Swedish military prepare for new roles in

international missions. The Swedish Armed Forces has participated in multinational operations of the European Union (EU), NATO and United Nations and currently has an operational presence in more than 20 countries. Along with four other EU countries – Finland, Norway, Ireland and Estonia – Sweden has been developing a rapid reaction capability called the Nordic Battlegroup (NBG). The NBG, which will be under Swedish command, is expected to be operational January 1, 2008.

NPS faculty and staff have gained considerably from this ongoing international exchange. We have gained first-hand insight on key technical issues faced by our partner nations and developed long-term collaborative relationships to bring visiting professors to NPS and send our faculty abroad.

The next TIO will be offered April 21 – May 9, 2008. Topics that will be included in this workshop include: quantum information systems, principles of operational testing and experimentation of weapon systems, unmanned aerial vehicles and payloads, advanced low probability of intercept radar waveforms, detection signal processing, rail gun technologies, advanced networking constructs and decision making theory.

The course will also include a fieldtrip to EDO Corporation's Reconnaissance and Surveillance Systems plant to participate in a series of technical lectures on electronic intelligence receivers and a tour of the manufacturing facility.

The CNO notes that a key element of the maritime strategy is trust. "Trust," he said, "must be built over time so that our strategic interests and those of friends, partners and allies are continuously considered while mutual understanding, respect and cooperation are promoted." The Technology for Information Operations international workshop supports fully the goals and vision of the Navy's unified maritime strategy. It represents one of the many positive ways that Naval Postgraduate School experts in the Graduate School of Engineering and Applied Sciences can be involved in international military affairs and coalition building.

Dr. Phillip Pace is the Director of the Center for Joint Services Electronic Warfare at the Naval Postgraduate School. He earned his Ph.D. from the University of Cincinnati and has received five patents for defense-relevant circuits and chip designs.

Global Security Cooperation Center Opens

President Dan Oliver and Lt. General Robert Ord, III, Dean of the School of International Graduate Studies (SIGS) and Director of the Global Center for Security Cooperation, hosted an opening ceremony at the Global Center for Security Cooperation on Friday, Nov. 16, to mark the official establishment of the center which occurred on Oct. 1.

Dr. Jeb Nadaner, Deputy Secretary of Defense for Partnership Strategy, Office of the Secretary of Defense (OSD), flew in especially for this event as the representative of the Secretary of Defense.

The Global Center arose from the vision of the Honorable Ryan Henry, Principal Deputy Under Secretary of Defense for Policy, in response to the 2006 Quadrennial Defense Review's recognition of the ongoing and expanding

requirements to engage with U.S. allies in coalition and interagency environments.

The center's mission is to develop and manage a single, integrated system of international education providers for the Defense Department and create new and better ways to support security cooperation strategy and the international educators who implement it.

Henry said in a recent letter to President Oliver and Dean Ord, "The Global Center is very important to our success in meeting the demand on our programs in all parts of the world...your organization will assist us in getting the most from our Security Cooperation investments worldwide."

Having the Global Center, an entity of the OSD, here at the Naval Postgraduate School is another feather in NPS' cap. In addition to the prestige of the center itself,

it provides a direct link to OSD and the Defense Security Cooperation Agency, as well as showcasing NPS faculty and programs on an international level and demonstrating NPS program relevance to Global War on Terrorism activities such as building partnership capacity of our partners and allies.

NPS is an important component of the Defense Security Cooperation Strategy, which specifies the many ways the United States reaches out to our partner nations. SIGS provides resident graduate programs for international officers, numerous mobile education teams that travel in-country, and conducts seminars and conferences with other nations' military and civilian leadership to help strengthen them and enhance U.S. tie them.

Henry as well as Congressman Sam Farr sent letters expressing their regrets at not being able to attend the ceremony. In his letter Congressman Farr expressed that, "the Global Center will significantly enhance NPS's reputation as the nation's premier international military education provider."



(Left to right) Center Director Bob Ord, Deputy Assistant Secretary of Defense for Partnership Strategy Dr. Jeb Nadaner and NPS President Daniel Oliver.

IN BRIEF

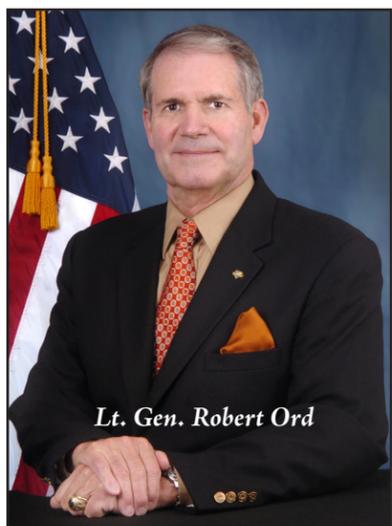
- ♦ Professor David R. Henderson of GSBPP briefed his study, "Do We Need to Go to War for Oil?" to congressmen on Capitol Hill. Lawmakers present for the brief included Representatives Ron Paul (Texas), Tom Tancredo (Colorado), Scott Garrett (New Jersey), Roscoe Bartlett (Maryland), Walter Jones (North Carolina), John (Jimmy) Duncan (Tennessee), Paul Broun (Georgia), and Danny Rehberg (Montana).
- ♦ The NPS new national media placement consultant, Gehring Associates, visited NPS in November and interviewed the president, provost and several department heads in an effort to increase visibility for NPS through news stories in prestigious publications such as the *Chronicle of Higher Education*, *Time*, *Newsweek*, *USA Today* and the *New York Times*.
- ♦ Research by the Explosive and Energetics Group, led over the last five years by Professors Ronald Brown (Physics) and Jose Sinibaldi (Mechanical Engineering) and supported by the Office of Naval Research, have helped develop methods for amplifying explosive detonation power. Approximately 25 NPS students have contributed significantly to this progressive work, including theoretical modeling computational simulation, and participation in off-site testing. In 2007, significant power gains were reached in experiments conducted at Naval Air Warfare Center-China Lake, and a practical application for enhancing underwater blast output was demonstrated by workers at Naval Surface Warfare Center-Indian Head. An upcoming experiment at Lawrence Livermore National Laboratory will assess the feasibility of reducing warhead weight and size while meeting demanding and sensitive munitions requirements.
- ♦ Lt. Cmdr. John Mentzer, a June graduate of the Mechanical Engineering program, placed 24th in the times trials for the Olympics which will be held in China in 2008.
- ♦ The new digital production/photo studio is under construction in Herrmann Hall (Room 034, formerly the Peacock Room). State-of-the art editing equipment and HD digital cameras will be installed in December and in January 2008 shooting of the new television program "NPS in Review" will commence.

Message From Dean of International Graduate Studies

In October, NPS hosted the 8th Annual North Atlantic Treaty Organization (NATO) Partnership for Peace (PfP) Training and Education Centers Commandants' Conference. PfP was launched in 1994 to increase stability, diminish threats to peace and build strengthened security relationships between individual Partner countries and NATO, as well as among Partner countries in Europe.

In his opening remarks at the conference, President Oliver stated, "The U.S. Naval Service has just unveiled its first major revision of strategy in 25 years, focusing on preventing wars, the encouragement of stability in fledgling democracies and the creation of stable, cooperative relationships around the globe...I'm proud to welcome you to the Naval Postgraduate School...at a time when international cooperation is particularly important for the United States Navy." The commandants' conference helped to foster security cooperation and provided an excellent opportunity to showcase NPS to an important leadership group.

In 2004, NPS received the honor of being designated as the only United



Lt. Gen. Robert Ord

States PfP Center, joining 12 other worldwide centers, and selected because of our institution's forward looking graduate education programs and experience in delivering education here and worldwide.

Through the years, the School of International Graduate Studies (SIGS) has embraced its mission of building cooperative relationships and partnership capacity of allies, partners and friends. In FY2007, SIGS educated over 6,000

international participants from 132 countries through courses conducted by the Center for Civil-Military Relations (CCMR) and Defense Resources Management Institute (DRMI).

The Center for Stabilization and Reconstruction Studies in CCMR continued its goal of building more effective responses to failed or failing states by inviting officials from U.S. and foreign armed forces, governmental civilian agencies, non-governmental organizations and inter-governmental organizations to participate in workshops addressing the challenge of coordination and combined action among diverse actors in stability and reconstruction operations.

It is the tenured, tenure-track and adjunct faculty of the Department of National Security Affairs and DRMI who provide the intellectual capital that enables NPS to influence these governments through advanced education.

SIGS remains fully engaged in supporting U.S. Navy strategy and NPS strategic goals as well as giving international participants the opportunity to develop synergies for stable, cooperative governments.

Appointments

The U.S. Senate has approved the appointment of **Dr. Doug Brook**, GSBPP professor and former Dean of the school, as the next Assistant Secretary of the Navy, Financial Management and Comptroller. During a farewell luncheon on Nov. 20, Business School Dean Robert Beck noting that the appointment will be a loss to NPS faculty and students, said, "He is really on TAD to DC and we will be looking forward to his return with fresh new ideas for all of us." Along with Rear Admiral Stan Bozin, Director of the Navy Office of Budget, Brook will remain active with the Conrad Chair Program and its students.

Dr. William B. Colson of the Physics Department has been elected to the rank of Fellow for the American Association for the Advancement of Sciences (AAAS) for his "outstanding contributions to the fundamental understanding of free-electron lasers and their subsequent development throughout the world today." The honor of Fellow began in 1874 and is acknowledged with a certificate and rosette, which will be presented to Dr. Colson in Boston on Saturday, February 16, 2008 during the AAAS Fellows Forum, a part of the association's annual meeting.

Faculty Notes

Lt. Col. Lee Ewing (NPS Operations Research Department), **Bill Tarrantino** (Confluent-Data Systems) and **Greg Parnell** (U.S. Military Academy Systems Engineering Department), received the Koopman Prize on Nov. 5 during the annual meeting of the Military Applications Section of INFORMS. The Koopman Prize recognizes the outstanding publication in military operations research.

During the INFORMS meeting, **Distinguished Professor David Schrady** (NPS Operations Research Department) was awarded the Steinhart Prize, which recognizes career accomplishments in practicing or managing military operation research.

Assistant Prof. Johannes Royset of the Operations Research Department has been awarded a three-year Young Investigator Award from the Air Force Office of Scientific Research (AFOSR).

The current *Naval Engineers Journal* produced a special issue on Human Systems Integration (HSI). Four of the nine articles in the journal were written by HSI faculty and students from the Operations Research Department including **Professors Nita Miller, Mike McCauley and Larry Shattuck**.

TRAC-Monterey won the 2007 Dr. Wilbur B. Payne Memorial Award for Small Group Analysis for its work on Rapid Equipping Force Analysis. Team members included Lt. Col. Jeff Schamburg, Maj. Eric Tollefson, Lt. Cmdr. Leon Higgins, Lt. Demetrius Mack and Senior Lecturer Larry Shattuck. The award was presented at the Army Operations Research Symposium (AORS) at Fort Lee, Virginia, in mid-November.

GSBPP faculty and students were cited and referenced in the new Commis-

sion on Army Acquisition and Program Management in Expeditionary Operations report entitled, *Urgent Reform Required: Army Expeditionary Contracting*, authored by former Undersecretary of Defense, Acquisition, Technology and Logistics Dr. Jacques Gansler. **Lecturer E. Cory Yoder** was cited twice in the final report that was formally distributed early in November. First, for his work, "Engagement versus Disengagement: How Structural and Commercially-Based Regulatory Changes Have Increased Risks in Federal Acquisitions," published originally through the business school's Acquisition Research Working Paper Series, and later in the *Journal of Public Procurement*. Yoder was cited a second time in the commissions report for, "The Yoder Three-tier Model for Optimal Planning and Execution of Contingency Contracting," also published originally as an NPS GSBPP Acquisition Research Working Paper. Additionally, two MBA project teams' works were cited in the report. First, "Joint Contingency Contracting," authored June 2005 by Ellsworth Johnson, Bryan Paton, Edward Threat and Lisa Haptonstall under the advisorship of **Lecturers Jeff Cuskey and Cory Yoder and Associate Professor Keith Snider**. The second MBA project cited was "Analysis of Contingency Contracting Support Plan within the Joint Planning Process Framework," December 2003 by Michael Anderson and Gregory Flaherty under advisorship of **Lecturers Cary Simon and Marshall Engelbeck**.

New Hires: Staff

- **Melissa Estueta**
Office Automation Assistant
Office of Continuous Learning
- **Allen Ganaden**
Office Automation Assistant
Computer Science
- **Danielle La'a**
Office Automation Assistant
Academic Planning
- **Irene Leyva**
Financial Technician
Comptroller
- **Steffen Merten**
Research Assistant
Defense Analysis
- **Laurel Minik**
Education Analyst
Registrar
- **Stacy Smith**
Office Automation Assistant
Computer Science

CALENDAR

Calendar Items - Events and Visitors Schedule, <http://www.nps.edu/Calendar/index.html>

December 1 - Celebration of the Season, POC Protocol Ext. 2466

December 3-7 - CNO DFP Cyber Defense Workshop, POC Cynthia Irvine Ext. 2461

December 10 - National Security Institute Reception, POC Pat Paulson Ext. 2371

December 13 - Navy Language Advisory Panel, POC Cmdr. Mark Huber Ext. 3782

December 13 - New Alumni Reception - Trident Room, Naval Postgraduate School Foundation, POC Kari Miglaw Ext. 2077

December 14 - Fall Graduation Ceremony: Dr. Delores Etter, Assistant Secretary of the Navy for Research, Development and Acquisition, POC Protocol Ext. 2466

December 17 - January 4 - Christmas Break

December 25 - Christmas (Holiday)

2008

January 2 - New Student Orientation, POC Capt. Kathryn Hobbs Ext. 2291

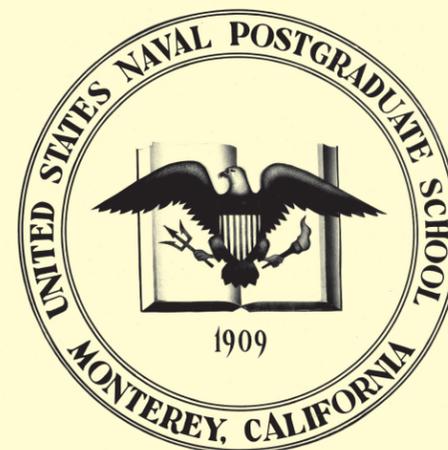
January 7 - Instruction Begins

January 17 - Deans Guest Lecture Series, GSBPP: Ingersoll 122, 3-5:30 p.m., POC Mary Lou Vossen Ext. 2471

January 21 - Martin Luther King Day (Holiday)

January 29 - Center for Homeland Defense and Security 5-year anniversary, POC Kate Lamar Ext. 2356

HISTORICAL HIGHLIGHTS



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.