DRMI Celebrates Fifty Years

by Kenneth A. Stewart

The Defense Resources Management Institute (DRMI) is celebrating 50 years of educating defense leaders with an eye toward creating sound fiscal policy and the efficient allocation of precious defense resources.

Since its first course in 1965, DRMI has educated 34,841 U.S. students and 20,258 international students from 171 different nations. DRMI graduates include prominent world leaders like His Majesty King Abdullah of Jordan, ministers of defense, ambassadors, and other dignitaries from around the globe.

“Our goal is to develop a broad-based analytical framework for defense decision makers emphasizing the economic and efficient allocation of defense resources, and to provide an environment for the comparative exchange of ideas related to the management of national security,” said DRMI Director Dr. Natalie Webb.

“For DRMI to stay relevant over this period of incredible change is a remarkable testament.” — Under Secretary of Defense (Comptroller) and Chief Financial Officer the Honorable Mike McCord

Under Secretary of Defense (Comptroller) and Chief Financial Officer, the Honorable Mike McCord recently weighed in on DRMI’s continued contributions toward the education of Department of Defense (DOD) policy makers during a celebration honoring DRMI’s 50th anniversary.

“Many things have changed over the last 50 years, from the cold war to a man walking on the moon and the fall of the Berlin Wall. For DRMI to stay relevant over this period of incredible change is a remarkable testament,” he said.

The Navy Management Systems Center, which eventually became DRMI, was established in 1963 by then Secretary of Defense Robert McNamara. Before he led the DOD, McNamara was the Chief Executive Officer of the Ford Motor Company and he attempted to apply some of the private sector economic principles that made him successful at Ford to the DOD.

“McNamara installed the Planning, Programming and Budgeting System [PPBS], which is still in use today. It requires good economic analysis, because the main problem in defense economics is the allocation of scarce resources among many competing interests under conditions of uncertainty,” explained NPS Professor Emeritus, Dr. James Blandin.
NPS, Marine Corps Partnership Enhances Readiness

By Kenneth A. Stewart

In 2009, then Commandant of the U.S. Marine Corps Gen. James Conway declared energy a top priority. Mere weeks later, the U.S. Marine Corps’ Expeditionary Energy Office (E2O) was born and tasked with analyzing, developing and directing the Marine Corps’ energy strategy.

“The expeditionary energy office works for the commandant of the Marine Corps with a mission to innovate and develop the Marine Corps’ energy strategy,” said E2O Director Col. Jim Caley.

But to do that, the Marine Corps required a pool of operationally savvy academics and the right mix of student researchers with the time and ability to explore the Marine Corps’ most demanding energy challenges. The Marine Corps found just that combination at NPS.

“The academic community here at NPS provides outstanding benefit to the Marine Corps and the job of the Energy Expeditionary Office,” said Caley.

NPS Associate Professor retired Army Col. Andy Hernandez leads NPS’ efforts to support the E2O office. Along with his own specific research for E2O, his primary objective is to match NPS faculty and students with Marine Corps energy research needs.

“The research that E2O requires is inherently multidisciplinary and ranges from the social and political sciences to engineering and mathematical disciplines.

“E2O provides a venue in which students can apply their newly acquired technical skills. These opportunities reinforce classroom lessons at NPS and crystalizes them for real problems,” said Hernandez.

One of those students is Marine Corps Capt. Michael Herendeen. He is using his thesis research at the Graduate School of Business and Public Policy (GSBPP) to look for fuel saving efficiencies by optimizing the manner in which the Marine Corps deploys its premiere combat unit - the Marine Expeditionary Brigade (MEB).

“I am looking at how we vary utilization rates and how we use our equipment in those operations. I want to understand how a marginal change in how we conduct operations mitigates the issue,” said Herendeen.

Herendeen is utilizing the Marine Air-Ground Task Force Power and Energy Model (MAGTF) to conduct his analysis of MEB force composition and deployment options. The MAGTF helps him to analyze fuel outputs down to the gallon per MEB vehicle and allows him to forecast the demand side of various MEB deployment options.

“Right now we are looking at five different force compositions, what differs between them is when you land certain elements of combat power, specifically different unit types. For example, do we land as many tanks as we can on day one, or do we phase tank deployments out between day one and day 50?”

“One of those students is Marine Corps Capt. Daniel Katzman, has taken a different approach to tackling the Marine Corps’ energy challenges. While working on his master’s in electrical engineering, he chose to explore the Marine Corps’ potential uses of Copper Indium Gallium Selenide (CIGS), which is used in the production of thin-filmed solar cells.

“CIGS are more robust than traditional solar cells and more difficult for Marines to break,” said Katzman. “They are something that has been around for a long time, but they have not been as efficient as typical solar cells.”

Katzman’s research was born of the realization that forward deployed Marines have become increasingly burdened by power requirements and battery inventories. He believes that solar cells have the capability to simultaneously lessen supply chains and significantly lighten loads for expeditionary units.

According to Hernandez, it is the combination of student research being conducted by students like Katzman and Herendeen, mixed with engaging class room discussions and academic development that make NPS such a powerful venue for educating naval officers.

“As a result of this continuing research engagement, NPS is able to develop viable curricula that will serve naval forces while directly supporting the strategic energy objectives of the Marine Corps,” said Hernandez.
NPS Alumnus, Retired Vice Admiral Talks Innovation During SGL

By MC1 Lewis Hunsaker

NPS alumnus and retired U.S. Navy Vice Adm. Michael C. Vitale shared a career of lessons learned in innovation with NPS students during a Secretary of the Navy Guest Lecture (SGL) at King Auditorium, Aug. 11. During the SGL, Vitale received NPS’ Distinguished Alumni Award from NPS President retired Vice Adm. Ronald A. Route.

“It’s been 26 years since I’ve been here. I see a lot of things have stayed the same and a lot have also changed. We used to have seven or eight peacocks; we now have Canadian geese, very innovative,” said Vitale with a smile.

Vitale became interested in innovation while serving as the commander of Navy Installations Command.

“I was trying to get my organization motivated. I knew where I wanted the organization to go. I had the vision. I had the ideas. I thought I had motivated the organization, but after two years, I realized I had not.

“All of you officers are going to be leaders, and at some point in time you will take command. In order to command, you have to build a successful team. In order to build a successful team, you have to have good tools in your toolbox. Today, I would like to add innovation to your toolbox,” said Vitale.

Vitale advocates a particular brand of innovation that recognizes the need for hard work and testing, Vitale calls it, “Innovating with Intent.” Innovating with intent requires innovators to focus on five distinct steps: visualize/imagine, ideate, test/experiment, lead the change, and educate.

“But according to Vitale, no matter how innovative you may be, your ideas will not gain traction unless you are able to sell them to the people that matter.

“If you have a great idea but you can’t sell it, it’s not worth anything. How do you get your boss, peers or subordinates on board follow the idea that you have shown will probably work?” Vitale asked.

Vitale shared several possible answers to the above question and recommended that potential innovators read Chip and Dan Heath’s, “Switch,” which promises to help readers change behavior.

Finally, Vitale challenged the assembled students, faculty and staff to educate themselves, and to become innovation subject matter experts.

“You have to become the expert in innovation. You have to constantly study. This is not something you are going to do tomorrow. When you get back into your commands you are going to try and figure out a better way… don’t be afraid of failing.

“At your current level, you are not going to command the culture in your organization. The commanding officer or executive officer may not be into innovation, your challenge is to change that mindset,” said Vitale.

“SGLs can broaden horizons by presenting ideas not typically covered by NPS coursework or other military requirements,” said Chair of the NPS President’s Student Council, Lt. Colleen McDonald. “The goal is to have students get involved, nominate future speakers of their choosing, and become an active part of the SGL program.”

Throughout Vitale’s 35 years of military service he held various leadership positions aboard the USS Reeves (CG 24), USS Comte De Grasse (DDG 974), USS Bainbridge (CGN 25), USS Yorktown (CG 48) and Carrier Group 4. He also was the Commanding Officer of USS John S. McCain (DDG 52), Destroyer Squadron 24, and the Commander of Navy Installations Command.

“First you have to visualize. Once you have an idea, you have to test it, collect data, and analyze it. That’s hard,” said Vitale. “Your idea has to be tethered to a problem. That’s why I say innovation with intent.”

Have a story to share? Public Affairs is constantly seeking interesting news and stories for Update NPS. Send your tips to pao@nps.edu.
NPS Says Farewell to Longtime Supporter, Alumnus

By Kenneth Stewart

NPS alumnus, former Director of Programs, and government travel specialist retired Navy Capt. James “Jim” Egerton passed away suddenly, Aug. 4, at the age of 82.

Retired Vice. Adm. Michael Vitale knew Egerton well, and spoke at length about him and the lasting impression Egerton made upon him during a recent Secretary of the Navy Guest Lecture.

“Jim was my second CO [commanding officer] in the Navy aboard the USS Reeves,” said Vitale. “He taught me how to drive ships, he taught me how to be a great officer, and he taught me how to take care of people. Most importantly, Jim left me with a legacy of leadership because he taught me to always do your best, to do it with class and style, and to always do what’s right no matter how hard it is, how long it takes, or how much it costs.

“I mention him today to honor what he did for me and the success that I have achieved because of him. I hope that all of you have such a man in your life and you can look back one day and thank him,” continued Vitale.

Members of Egerton’s travel office team have equally fond memories of him.

“Jim was the one who first trained me in DTS [Defense Travel System] matters about four years ago,” said Travel Assistant Jon Lim. “Since then, I’ve had the good fortune of working alongside him on a daily basis. He has been, and always will be, a significant part of the travel office family. Whenever anyone needed help on a complicated travel matter, he was the man to consult. I will remember his dry sense of humor and work ethic.”

“Our office meetings will never be the same without Jim. Whether he intended to or not, he always gave us a good laugh,” added Passport Agent Monique Resquir.

Deputy Comptroller Jack Shishido worked with Egerton for 11 years.

“The first person to introduce me to NPS was Jim. He’s how I got here,” said Shishido.

Over the years Shishido and many others have relied upon Egerton’s in-depth knowledge of defense travel regulations, which he often quoted on demand while answering difficult questions or training members of the travel office.

“Jim was our go-to-guy. He was the travel subject matter expert, no bones about it,” said Shishido. “He not only taught us the rules, he wrote many of them.”

Jim’s connection to NPS spanned nearly half a century. He first came to NPS as a student and lived in one of the cottages next to Herrmann Hall. He was the Dean of Programs [now Dean of Students] from 1985 to 1987, and returned to Monterey after retiring from the Navy to work in the travel office.

Border Patrol Chief Lectures at CHDS’ Executive Leaders Program

By MC3 Brian H. Abel

U.S. Border Patrol Chief Michael Fisher met with NPS Center for Homeland Defense and Security (CHDS) students during CHDS’ Executive Leaders Program (ELP), Aug. 12. Fisher was invited to CHDS to speak to ELP attendees on the major challenges facing the U.S. law enforcement and border patrol communities with an eye toward collaboration.

“I was invited to talk to one of the classes that is graduating. They were interested in hearing from someone within the organization about border security and law enforcement challenges. They are an eclectic group, and I am really dying to have a dialogue with them,” he said.

Fisher fielded student questions, helping them navigate the often- competing interests with which border patrol professionals have to contend. He also offered students a window into how law enforcement strategies are formulated and missions are conducted along the border.

“We’re thinking about how we can do the national and border security mission better and smarter,” said Fisher. “Often times, border security is clouded in the policies and politics of immigration broadly.”

Students attending the program come from a variety of complementary public safety and law enforcement agencies.
Army Cadet Contributes to Laser Research

By MC3 Brian H. Abel

U.S. Army Cadet Dan Mauldin spent his three-week summer internship, among other things, measuring atmospheric optical turbulence on remote San Nicolas Island off the Southern California coast. Mauldin’s measurements are contributing to research at the university that may one day impact Navy shipboard laser systems.

Mauldin’s internship was performed under the guidance of NPS Department of Systems Engineering Associate Professors Robert Harney and Doug Nelson.

“Atmospheric optical turbulence has an important impact on imaging and laser propagation systems. A high energy laser weapon system will see its effects in search, detection, acquisition and pointing, impacting multiple sensors and laser systems,” said Nelson.

Fellow Systems Engineering Senior Lecturer Mark Stevens noted that in order for a laser to be effective, its beam must be tight and focused upon its target, hence the need to understand environmental processes that could lead to laser diffraction, rendering shipboard lasers far less effective. San Nicolas Island was an ideal testing environment.

“The measurements on San Nicolas Island provide a long term reservoir of data that can be analyzed for diurnal and longer term trends that will assist the warfighter in preparing to use sensors and laser systems,” said Nelson.

NPS Space Systems Academic Group Honors Legacy With ‘Space for Space’

By MC2 Michael Ehrlich

NPS’ Space Systems Academic Group (SSAG) recently acquired a piece of the leading edge of a wing from one of NASA’s Space Transportation System orbiters, also known as the space shuttle. The piece, one of only a few that can be viewed outside a museum, will soon join what is becoming an impressive collection of memorabilia honoring the university’s legacy in space operations and exploration.

“What we have is RCC panel number 11 from the right side of the leading edge of a wing from a shuttle,” said former astronaut and National Reconnaissance Office Chair retired Navy Capt. Daniel Bursch. “The leading edge of the wing and the nose are made to take upwards of 3,000 degrees Fahrenheit.”

The wing edge acquired by NPS is from an unlaunched duplicate space shuttle very similar in design to that of the Space Shuttle Columbia. In fact, if it were from the Columbia, it would be located very near the piece that NASA experts say led to the devastating Columbia disaster that occurred in February of 2003.

NPS Foreign Disclosure Officer Lt. Cmdr. Robert Kerchner and Senior Intel Officer Capt. Daniel Verheul, have reached the end of a two-year effort to establish an on-campus foreign disclosure program. The program aims to clarify policy regarding the release of information to foreign sources.

Professor Keith F. Snider has been elected to serve on the Executive Council of the Network of Schools of Public Policy, Affairs, and Administration (NASPAA). Snider is a Professor in NPS’ Graduate School of Business and Public Policy.

The Student Services Office has launched a Virtual In-Processing (VI-P) system. VI-P allows incoming students to complete all their initial inprocessing requirements remotely and saves students time standing in lines when they initially arrive at NPS.


NPS Space Systems Academic Group (SSAG) Chair Dr. Rudy Panholzer, right, stands with a recently-acquired piece of the leading edge of a space shuttle wing, Aug. 3. (U.S. Navy photo by MC2 Michael Ehrlich)
ARSENIL Reaches Its Ultimate Goal of 50 Autonomous UAVs in Flight

By MC1 Lewis Hunsaker

Members of NPS’ Advanced Robotic Systems Engineering Laboratory (ARSENIL) flew 50 autonomous UAVs at Camp Roberts, Aug. 27. The successful flight of 50 autonomous UAVs broke ARSENIL’s previous record of 30 UAVs, set just five weeks ago.

“I’m very proud of reaching our goal of successfully flying 50 autonomous UAVs simultaneously,” said NPS Assistant Professor Timothy Chung.

The 50 UAVs were launched and flown autonomously in two “sub-swarms” of 25 UAVs each and guided using ARSENIL-developed swarm operator interfaces. The UAVs performed basic leader-follower cooperative behaviors and exchanged information amongst themselves via wireless links.

“This project came from the notion that quantity is a quality,” said Chung. “It’s like trying to play a game of tennis against an entire 5th grade class. If they were all lobbing tennis balls across the court, it would be very hard to defend against them.”

In the past, each aircraft would be operated by a single person, which makes for a very large footprint with many moving parts.

“One of the ways we can mitigate that is transferring autonomy. These robots can make limited decisions … that will alleviate some of the pressure on our human operators,” said Chung. “Today, we were able to successfully control 50 UAVs with two operators that managed the aircrafts’ behaviors and health.”

NPS Consortium for Robotics and Unmanned Systems Education and Research (CRUSER) Director Raymond R. Buettnner is hopeful about this technology’s future applications.

“Twenty years from now when aerial swarms are routinely helping farmers improve their crops, helping rescuers locate lost children, and helping warfighters to win our nation’s wars, people will be able to look back at the efforts of NPS faculty and students in the skies over Camp Roberts as one of the seminal events that made such things possible,” he said.

Chung noted that ARSENIL’s recent successes would not have been possible without the hard work and initiative of its systems engineering and cross-campus team members including NPS professors, Naval reservists, summer interns, NPS students and many more.

Focus On … Staying Data Driven

A Monthly Look at Names and Faces on Campus

Mara Rosenthal at the Institutional Research, Reporting, and Analysis (IRRA) office is NPS’ data oracle.

“I create data reports on anything I’m asked about. For instance, graduate students ask for data reports for their thesis projects while professors may ask for curriculum data,” said Rosenthal. “I do my best to return accurate and timely data reports.”

Rosenthal says even though her job is time consuming and often challenging, she keeps focused with an insatiable desire to help others.

“It’s a great feeling being able to help the students directly” she said. “Those who need my help can expect a quick and accurate turn around. I don’t mind helping anyone and I take a lot of pride in my work.”

On her free time Rosenthal instructs yoga and she often applies lessons that she has learned from the philosophy to her work at NPS.

“Sometimes when I struggle with morale I use meditation techniques that help me focus on being the best help I can be,” said Rosenthal. “Yoga helps me to keep a full picture perspective and to not get sucked in by negativity,” she said.

Rosenthal grew up here on the Monterey Peninsula.

NPS Assistant Professor Timothy Chung, center right, is pictured with members of NPS’ Advanced Robotic Systems Engineering Laboratory (ARSENIL) team during a field exercise at Camp Roberts, Aug. 27. The NPS team simultaneously flew 50 autonomous unmanned aerial vehicles breaking their previous record of 30, just five weeks ago. (U.S. Navy photo by Javier Chagoya)

Data Analyst Mara Rosenthal

“NPS is one of the pillars of this community. If you want to help impact this community, there is no better place,” said Rosenthal. “I hope to retire here someday.”
STUDENT

Lt. Colleen McDonald
Chairman of the
President’s Student Council

The PSC Community Leadership program starts back up this month with the start of the high school academic year. Numerous NPS students have stepped forward to spend their time with the Monterey High School JROTC, lending their support during PT sessions and classroom leadership and ethics discussions.

The PSC is also working to provide a mentor for the Patriot Cyber Team as requested by the Everett Alvarez High School in Salinas.

Additionally, the PSC has begun a “Student in the Spotlight” section in its monthly newsletter, which will highlight a student nominated by his and her peers for recognition. This month, the PSC is recognizing Graduate School of Business and Public Policy (GSBPP) student Lt. Cmdr. Wendell Stephens. As the President of the Supply Corps Foundation’s Monterey chapter, Stephens has been an active volunteer for events such as the Big Sur Marathon and Half Marathon. He has also organized community events to feed the homeless throughout the Monterey area.

Also of note, two PSC members represented the student body on the Hamming Award Committee. The committee was composed of professors and students who reviewed student nominations to determine the recipient. The Hamming Award is designed to recognize excellence in classroom instruction, thesis advising, and contributions beyond the classroom.

The awardee has been notified and the award will be presented at the upcoming graduation ceremony.

Have a story to share?
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**On Campus this Month**

**September 10**
Vice Adm. Thomas Rowden
Secretary of the Navy Guest Lecture
3:00 p.m. at King Auditorium

**September 11**
9/11 Commemoration Ceremony
8:00 a.m. (Morning Colors)
9/11 Memorial

**September 21-24**
Warfare Innovation Workshop
Creating Asymmetric Warfighting Advantages
8:00 a.m. at Glasgow Hall 102

**September 25**
Summer Graduation Ceremony
10:00 a.m. at King Auditorium

**September 25**
Fall Fun Run 5K
3:00 p.m. in front of Herrmann Hall

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Assessment and Risk (SPEAR) Workshop
8:00 a.m. at IN-387

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**September 15-18**
Assessment and Risk (SPEAR) Workshop
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**Historical Highlights**

Several NPS students went on experience tours this quarter, continuing a practice established just prior to WWI, when NPS was co-located with the Naval Academy at Annapolis.

Early experience tours varied in length and were not required in all programs. Ordnance engineering students had the most rigorous schedule, spending their first four months in the postgraduate school’s classrooms, then more than a year studying at the Naval Proving Ground, Naval Gun Factory, a steel plant, Bausch & Lomb and Sperry Gyroscope.

This month, combat systems students will spend a fast-paced week at Aegis headquarters and Aegis test, development and modernization sites while Navy, Marine Corps and Army students in operations research are visiting their program sponsors for three weeks. Capt. Jeff Hyink, chair of applied systems analysis, noted that the OR experience tour is a long-standing part of the curriculum that often opens doors for operationally-relevant thesis research.

*Historical Highlights are provided by the Dudley Knox Library.*