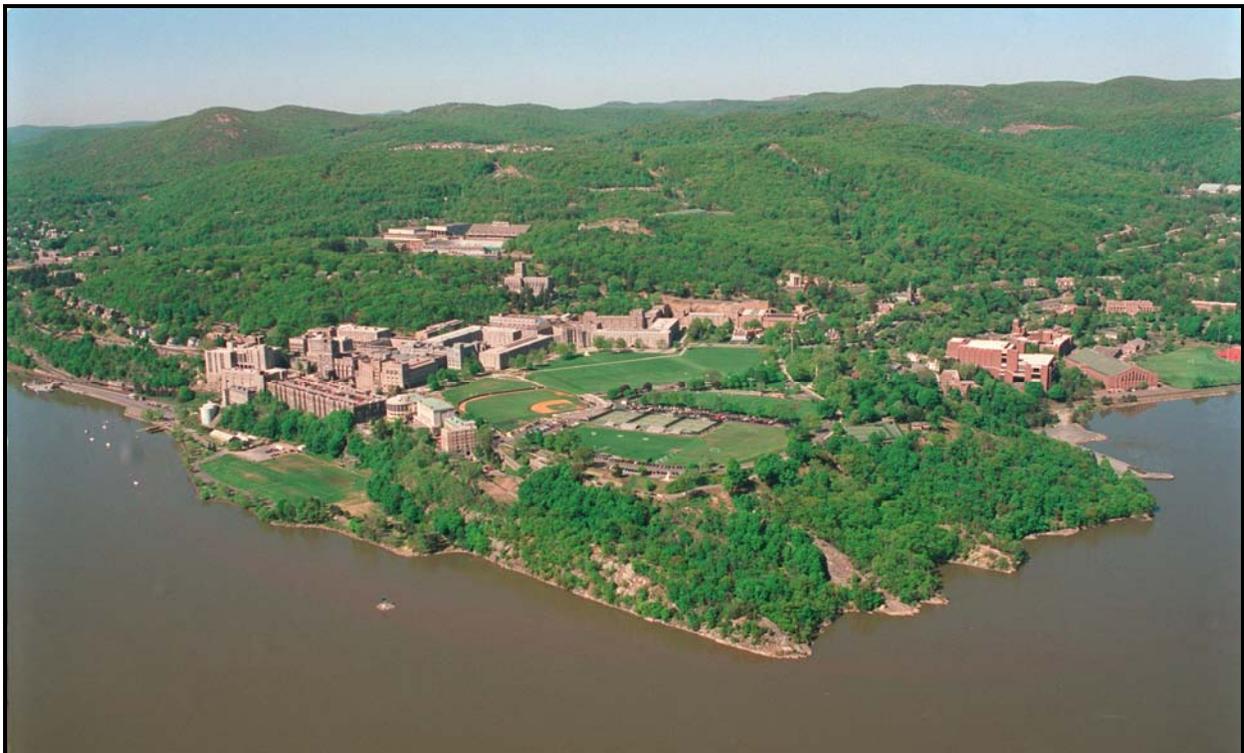




# Department & Alumni Newsletter

February 2008



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This Newsletter was compiled and edited by MAJ Ian Irmischer.

# From My Perspective

## Colonel Eugene J. Palka Department Head

From my perspective, academic year 2006-2007 was exciting, productive, and memorable for our department. After a busy summer that included summer school, land navigation training, the summer leaders seminar, new instructor training, faculty research, and fieldtrips all over the world, we got back into our routines and had a great fall semester. We are now in the midst of recharging our batteries for the second semester, so it seems like an opportune time to conduct an azimuth check and prepare this publication. It is my hope that this newsletter will continue to keep our families and faculty alums well-informed of our activities and developments within the department.

Since our previous newsletter, we graduated another class of cadets and have returned to the field Army another cohort of instructors. The class of 2007 included 71 cadets who majored within our department and 168 who completed our environmental engineering sequence. This fall, 108 members of the class of 2010 selected majors within our department, and 161 chose the environmental engineering sequence.

In addition to our cadet graduation, each June witnesses the departure of one cohort of rotating faculty members and the arrival of another group. Six of our officers returned to the field after completing successful tours in the department. Lieutenant Colonel Dan Gilewitch was assigned to the Multinational Security Assistance Command and is currently serving in Iraq. Meanwhile, Majors Phil Dacunto, Brian Doyle, Bill Epolito, Chris Oxendine, and Megan Peguero departed from West Point and moved on to various staff colleges and follow-on assignments. Each made monumental contributions to D/G&EnE, USMA, and the West Point community. We will surely miss them and their families, but we are grateful for their dedicated service. On the other hand, we have backfilled these individuals with another bumper crop of NIT-qualified “blue-chippers,” including Major Will Clark, Major Hannon Didier, Major Brian Dunmire, Major David Roux,

Captain Matt CuvIELlo, Captain Adam Czekanski and Ms. Sandra Dunlap. Consistent with our longstanding tradition, our newest members of the faculty bring with them a wealth of operational experience from a wide range of branches and hail from some of the best graduate programs in the country.

During the summer, our vision of a center of excellence focusing on language, culture, and regional studies came to fruition. We share the center, formally named the “Center for Language, Culture, and Regional Studies (CLCRS) with the Department of Foreign Languages. Two of the center’s three members (Dr. Rick Wolfel and Dr. Peter Siska) are assigned to the department and both have made immediate, positive impacts.

In the fall, we hosted a wonderful retirement ceremony for Lieutenant Colonel Frank Galgano. It was a first class affair and a fitting tribute to a great officer who spent 8 of the past 9 years at USMA. We will surely miss Frank, and we will continue to be grateful for his many contributions to our department, the academy, and the West Point Community.

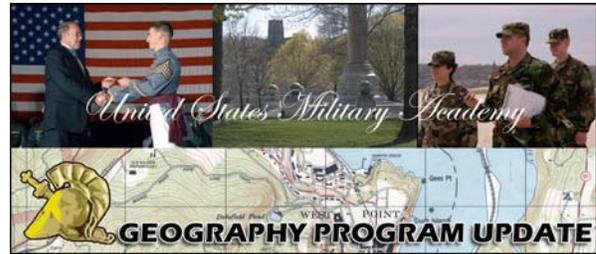
While we continue to focus on teaching as our primary mission, we also continue to bring credit to our programs, department, and USMA via our professional publications and outreach to the Army and local communities. Over the past year, our faculty members have published books, book chapters, instructor’s manuals, government reports, articles in journals and magazines, and delivered a countless number of papers at professional conferences. Meanwhile, they employ cutting-edge techniques in the classroom, effectively engage cadets, and have proven to be inspirational teachers and mentors. I could not be more proud of our continuing legacy in these areas.

Our faculty members also continue to support a wide range of cadet activities outside of the classroom. This past summer, we planned, coordinated, and executed 21 different AIADs for 72 cadets. Geographers traveled to Israel, Vietnam, Serbia, Bosnia, Croatia, France, Japan, South Korea, and the Four-Corners region of the American Southwest. Environmental scientists and engineers participated in AIADs with the Corps of Engineers in Boston, USACHPPM at Aberdeen Proving Ground, FEMA, and the Army Environmental Center (AEC), and conducted geology

field trips to Death Valley during spring break and to the “Big Island” of Hawaii during the summer. GIS cadets traveled to Panama and Alaska and held internships with Space Command in Colorado Springs, the Topographic Engineering Center in Alexandria, Virginia, and the Defense Geospatial Intelligence School in Washington, D.C. Moreover, we continue to provide a number of volunteer OICs and coaches for various cadet activities and clubs, as well as Officer Reps for the academy’s intercollegiate athletic teams.

As many of you recall, we also continue to sponsor USMA’s Orienteering Team. The tradition of excellence continues, as evident by winning the 2007 collegiate national championship. Additionally, for the third year in a row, the team was able to travel to Europe to participate in the world championships.

In summary, life remains good in the department and the view from the 6<sup>th</sup> floor of Washington Hall continues to be awe-inspiring. I consider myself to be fortunate, and yet accountable to all of you who have served on our faculty, so rest assured that I will keep the ship on a steady course. Please make it a point to stop by for a visit if you have the opportunity to return to West Point. I would welcome the chance to show you around the department. Best wishes to you and your families throughout 2008! **GO ARMY!!**



## Colonel Laurel J. (Laurie) Hummel Program Director

Greetings to former staff and faculty, and friends of the department! This year has been yet another exciting and busy year. The first rate group of military officers and civilian faculty continue to contribute to the program with their dedication to academic excellence and cadet development in all the domains of endeavor. Some highlights from this past year include eleven Advanced Individual Academic Development (AIAD) opportunities where cadets travelled abroad to hone their language, cultural, and regional expertise. Another achievement was the graduation of the program’s first ever honors class. Nine cadets participated in the two semester honors sequence, which began with a course in Research Design and culminated 3 May 2007 with the completion of honors theses and oral presentations delivered during Projects Day. These cadets examined a wide variety of geographic subjects, and the nine unique research papers ranged in topic from the geography of ice cream parlors to child soldiers in Liberia. Cadet Tari Glowacki won the best paper prize with her research on fertility rates in developed countries. Our student base continues to be robust; we added 49 wonderful yearlings to the program as Human and Environmental Geography majors. We have also added a meteorology course to our environmental geography major. Lt Col Rios’s work and dedication to this task have served to strengthen the program’s courses.

The geography faculty continues to be involved in many extra-classroom cadet development experiences. The cadets now have the opportunity to join the Geography Club, headed by Dr Amy Richmond and Majors Jason Ridgeway and James Chastain. Part of the geography



*Dirtman and Dirtwoman provide encouragement and guidance to cadets preparing to conduct Site 2 land navigation training.*

club's activities included sending over 20 boxes of books to the Al-Birooni Academy, a women's school in Khandahar, Afghanistan. Many of our faculty served as Officer Representatives and OICs for programs such as Wrestling, Football, Soccer, Orienteering, Hockey, Women's Volleyball, Navigators, and a host of other activities. One of our officers, Major James Chastain, has been named interim head coach of the Sprint Football team. Major Chastain also served as the Cadet Field Training Land Navigation Committee Chief.

And of course, the DIRT skit! This year's Dirt Skit, "The Coriolis Ultimatum," cast the DIRT instructors as men and women on a mission to save CDT Owen Tolson (Army's kicker, and a Corps favorite) and foil the evil midshipman. The highly successful production featured a chase scene for the ages, TACs, Real Instructors of

Genius (based on the Budweiser commercials) as well as DIRTMAN and DIRTWOMAN waterskiing. Each show ended with the Dirt Band rocking WH5300 and the cadets going crazy. The skit was truly an all-hands effort and a labor of love; Majors Will Clark and Matt CuvIELLO dedicated a tremendous amount of time to making the skit a Dirt classic.

Including 7 permanent faculty members, our team consists of 17 faculty members – comprised of 10 doctoral level and 7 master's level – teaching EV203 to the yearling class and electives to our 118 majors in the classes of 2008 and 2009. Team Geo's Title X civilian human geographer is Dr. Jon Malinowski, who is in his thirteenth year with the Department and was recently promoted to Professor of Geography. Jon heads up the Human side of the program, where the majority of our majors re-

side. He continues to make our incoming majors excited about the discipline with his Foundations in Geography course. Jon's research agenda ranges from the historical geography of Orange County, NY to behavioral geography. He also serves the entire academy with his expertise in photography, and his videography skills have created our department's video public relations outreach, "DirtVision". Our Title X environmental geographer, Dr. Amy Richmond, is in her third year of service. She continues to teach Environmental Geography and took cadets on several field trips this year including a visit to New York City's first environmentally friendly building, The Solaire. Amy's research centers on energy and natural resource issues; she most recently collaborated with Majors Chris Oxendine and James Chastain on an INSS grant to research the United States' resource dependency.

### **Comings and Goings**

Graduation is an exciting time around the Academy, but it holds some bittersweet moments as well. As always, we are forced to say goodbye to some terrific officers and their families. This spring, Lieutenant Colonel Dan Gilewitch and Majors Brian Doyle and Megan Peguero left us. After four years in our program, Dan Gilewitch is now in Iraq as part of the Ministry of the Interior Program Manager Security Assistance Office. Brian Doyle departed in June after three years with us, and is currently a student at the United States Army Command and General Staff College at Fort Leavenworth, Kansas. Having honed his coaching skills with the Army Sailing Team, in October Brian served as the coach for the United States Armed Forces Sailing Team at the 4th Military World Games in Mumbai, India. Also with us three years, Megan Peguero is now in Newport, Rhode Island where she is receiving another Masters from the Naval War College. This fall the program experienced another loss, as LTC Frank Galgano retired from the army after 27 years of service. Of this he spent more than 11 years as a member of the geography program. We are immensely happy for him as he moves with his family to Pennsylvania to head the new Department of Geography and

the Environment at Villanova. Frank's vast contributions to both the department and the geography program will not be forgotten; many former faculty members are graduates of the terrific New Instructor Training program that he developed and ran during many hot summers in Washington Hall! All of these exceptional officers will be missed and we wish them the very best.

New to the department this year are three Title X civilian faculty and three outstanding military officers. Dr. Peter P. Siska, his wife Cathy, and five children: Lukas, Lydia, Nicolaus, Karl, and Eva, joined us this past summer from Clarksville TN, where Dr. Siska had been an associate professor at Austin Peay State University. His background focuses primarily on natural resource management, spatial analysis, geostatistics and geographic information systems. Dr. Richard Wolfel joined us from Southern Illinois University, along with his wife Heather and two sons Noah and Lucas. Rick's focus is primarily on cultural and political geography. Both Peter and Rick are here to support the new Center for Language, Culture and Regional Studies (CLCRS). CLCRS is a proposed USMA center of Excellence focused on increasing language proficiency, cross cultural competence and regional expertise at USMA in particular and the Army in general. They are currently working on tools to assess the effectiveness of international study abroad programs and short term cultural immersion experiences on language proficiency, intercultural awareness and regional knowledge. Within the Army, CLCRS is developing relationships with TRADOC's Culture Center to assist in development of training material for deploying units and with the Human Terrain System Program to assist in the development of geographic and cultural materials to increase their teams' effectiveness.

The third new civilian faculty member is Sandi Dunlap. She joins after four and a half years of teaching Earth and General Science at a private bilingual secondary school in Siguatepeque, Honduras. Sandi is on a short term appointment to assist us in meeting EV203 teaching requirements given the recent increase in the size of the Corps.

Our three new military officers are Majors Brian Dunmire, Will Clark, and Matthew Cu-

viello. Major Dunmire was previously assigned to the Army Human Resources Command as an assignment officer before coming to us as a 'direct fill' instructor. His last operational assignment was at the Special Operations Command Joint Forces Command in Virginia. He is currently ABD at Old Dominion University, writing his dissertation on regional security complexes. Brian holds three Masters degrees: one in International Relations with a concentration in security policy from St. Mary's University of San Antonio, a Masters of Military Arts and Sciences with a concentration in strategy from the Army's Command and General Staff College, and a Masters of Science in Strategic Intelligence with a concentration in counter-denial and deception analysis from the National Defense Intelligence College in Washington, D.C. He currently teaches EV203 (Physical Geography), and will be teaching EV365 (Geography of Global Cultures) and EV374 (Geography of the Middle East and Africa).

Major William Clark and his wife Amy along with their daughter, Erin (3) join us from the University of Utah. Will's research at Utah investigated the use of remote sensing technologies to accurately predict future vegetation conditions for the purposes of better range management in the upper Colorado River basin. Before graduate school, Will was stationed at Fort Richardson, Alaska where he completed two company commands and worked for the U.S. Army Corps of Engineers. Will teaches EV203 and will course direct Geomorphology. Major Matthew Cuviello attended the University of North Carolina at Chapel and earned his Masters degree in Geography with a concentration on Climatology. Matt's thesis work focused on determining winter precipitation types in North Carolina based on synoptic and mesoscale data analyzed over a thirty year period. Before his studies at Chapel Hill, Major Cuviello commanded two companies at Fort Knox, KY and deployed to Afghanistan and Iraq in support of the Center for Army Lessons Learned. He is scheduled to teach EV203: Physical Geography, EV389B: Climatology and EV482: Military Geography during his tenure with us. Matt's wife Amy and children Carson, Austin Joe, Grace, and Caleigh round out the Cuviello family.

## Academic Year Highlights

The past academic year was highly successful and included a number of notable personal achievements by cadets and faculty. We are extremely proud that Dr. Jon Malinowski and Major James Chastain were selected for full Professor and Assistant Professor, respectively; this is a great honor and is indicative of their scholarship and efforts in and out of the classroom. LTC Steven Oluic's book "*Bosnia & Herzegovina: Identity, Nationalist Landscapes and the Future of the State*," was published by the University of Columbia, East European Monographs this past fall. He received a three week overseas research grant to study radical Islam in the Sandzak region of Serbia, and was also invited to speak at the Defense Intelligence Agency, Department of State, Columbia University, and the European Center for Peace and Development's Conference in Belgrade, Serbia. LTC Steven Oluic continues to evolve into one of the world's foremost experts on the Balkans. Dr. Marcia Caldas de Castro from Harvard University served as guest speaker and honorary Master of Ceremonies at the annual Gamma Theta Upsilon (GTU) induction ceremony on 13 February 2007. Dr. Marcia Caldas treated the assembled faculty and cadets to an intriguing presentation on using geography to answer social questions. This was our fourth cohort of inductees from the Geography and GIS programs to GTU. During the fall GTU luncheon, LTC Frank Galgano served as the guest speaker, informing our cadets about the wide range of geographical research and its relevance to the army, using several case studies to illustrate his points.

GTU continued to sponsor teams participating in the World Geography Bowl during the 2006 annual conference of the AAG's Middle States Division. Our GTU team traveled to Rutgers University for this event. Cadets Andy Main and Jenifer Lichty were named to the Middle States Division team for competition in the national Geography Bowl in San Francisco, where they won the national championship. Overall, our participation in the Middle States Conference was very successful and the Academy and Department were well represented. Clearly, GTU is meeting

its objective of raising the level of scholarship within the Geography Program.

The program held its fourth graduation awards ceremony on 25 May 2007. The ceremony was preceded by a reception and the event was greatly appreciated by our cadets and their families. We had a great turnout with many family members and cadets in attendance. During the ceremony, we reviewed the year's academic highlights and recognized our top performing cadets:

Top Three Geography Graduates 2007:

Jennifer Lichty  
Nathan Gontarz  
Matthew Vargas

Top Human Geography Major:

Nathan Gontarz

Top Environmental Geography Major:

Jenifer Lichty

Best Honors Thesis:

Tari Glowacki

Top Military Geography Student:

Andrew Main

This year's graduation awards ceremony will be held immediately following the Graduation Parade on 29 May 2008.

### Geography Program AIADs

The AIAD program is a great opportunity to demonstrate in the field those concepts taught in the classroom. Furthermore, the program is an outstanding enrichment opportunity for cadets enrolled in our program. This year our program afforded cadets the opportunity to increase their geographic awareness of the southwest United States, Israel, Morocco, Korea, the Balkans, Japan, France, Vietnam and India.

### Four Corners, USA

#### Dr. Amy Richmond & Major Megan Peguero

The Four Corners cultural immersion was an Advanced Individual Academic Development (AIAD) trip, funded by the Dean's Office to the southwest United States. Two faculty from the Department of Geography and Environmental Engineering (D/GENE) hosted the eleven day trip for six cadets. There were many academic objectives for the trip, all centered on exploring the cultural, human, and physical geography of the area. Primarily the goal was to gain a better understanding of the Native American culture, how it has merged with the Mexican-American culture, and how it has evolved throughout history. An additional objective was to explore the vast and beautiful physical geography of the region.

The Southwest United States is a unique part of the country. Much of it is under populated and incredibly poor. The amalgamation of different cultures is also evident in the area. While trying to keep their traditional cultures intact, Native Americans also know they need to earn money to survive. The merger of traditional cultures with modern conveniences (upscale hotel chains, visitor centers, and fast food restaurants) is prevalent in many towns. Some locations merged the differences seamlessly, while others struggled to make the combination work. Religion is another area where a merging of cultures is clear. Many parts of the reservations merged Catholicism and Native American religions to form a composite sect with facets from each. The cadets found



*Cadets Cody John, Tyler Markel, Brianna Dickenson, Jeralee Hartman, Bill Leahy, and Robert Lewis in Monument Valley, Arizona.*

these applications of what they had learned in class very interesting.

The physical geography and landscape of the region is also very diverse and amazing. The climatic, geomorphic, geologic, and ecosystem changes within the scope of the trip are tremendous. The trip demonstrated the concept of altitudinal zonation as we drove from Utah into Colorado and back again to Arizona. The cadets also enjoyed seeing how different landscapes are based on wind erosion and from glacial and fluvial processes.

Overall, this trip was a huge success. The cadets thoroughly enjoyed the trip and they learned a great deal about Native American (primarily Anasazi) culture and how it blends with the surrounding cultures in the southwest. The highlights of the trip were both things that were added this year. The cadets enjoyed our experience at Winslow Ranch in Arizona. Here they got to ride horses and actually do some cattle ranching. They had insight into the “cowboy” culture by experiencing the museum that is part of the ranch. The differences between this life style and the Native American culture were very interesting to observe.

## **Israel** **LTC Lou Rios**

The trip began with a ten hour flight from JFK to Ben Gurion International in Tel Aviv and was divided into three distinctive parts. The first part was a cultural, political and historical look at the modest way the modern state of Israel began with the “creation” of the city of Tel Aviv back in 1909 on a sand dune-covered beach. From there we visited the Holocaust Museum which was a sobering and a startling reminder of that dark moment in human history. Opportunities to discuss Israeli politics with several local scholars followed, affording cadets with an extensive question and answer session in an effort to understand the many differences and few similarities between the US and Israeli forms of government.

The second phase of the trip was a mix of visits to cultural and natural landscapes scattered throughout the central portion of Israel including a fascinating look at the intersection of three of the world’s major religions right in the heart of

Old Jerusalem. Cadets got a close look at the many sources of conflict that arise from land rights, historical claims and the complicating factors of issues present to every day Israeli citizens. Cadets enjoyed swimming in the Dead Sea, Mediterranean Sea, Red Sea and Sea of Galilee and hiking through desolate sections of the Negev desert trails to get to hidden-away springs and swimming holes.

Finally, the last phase of the trip included several visits to Israeli Defense Force (IDF) installations. Cadets got a first hand look at how the IDF conducts military operations, training and education of its officers and officer candidates within their Army, Air Force and Navy. Everyone came across with the distinct impression of how dedicated, young, efficient and disciplined their forces are, driven by the reality of being surrounded by many other states that would do it harm. We all agreed that readiness is a state of mind in Israel and this was a point not lost on anyone that was fortunate enough to be there this past summer.

## **The Moroccan Experience** **Dr. Amy Richmond**

On the Moroccan Experience AIAD, cadets got the opportunity to study the Arabic language and experience the culture while staying with a Moroccan family in the city of Fez. It consisted of a 60 hour language course through Amerispan at the American language Institute in Fez. Cadets attended class 4 hours a day and had the rest of the time to experience the culture. Over the course of 3 weeks, they traveled to the cities of Rabat, Chefchaouen, Tetouan, Volubulis, and Fez. Besides learning Arabic through the classroom, they had the opportunity to use the language with native speakers in and out of house. One of the highlights in Fez was attending a Moroccan wedding. Here, cadets were able to see true traditional ceremonies and practices that have been unchanged for hundreds of years. Host families also cooked traditional Moroccan food and taught proper table etiquette. This consisted of eating at a round table sharing food from the same bowls with the entire family. Having the opportunity to not only visit a foreign country, but experience and embrace the culture allowed

cadets to better understand society that they might deal with in the future. Life in the Medina, also known as the ancient part of the city, was an integral part of seeing daily life on a first hand basis. At the conclusion of the AIAD, cadets felt more comfortable and confident using the customs needed to properly communicate in another language. The participants currently keep in touch with their host families and plan to return to Morocco in the future in order to continue their education of the Arabic language and culture.

## **Korea**

### **LTC Joseph Henderson**

The department hosted two new AIADs to Korea, thanks to funding from the newly-formed International Academic Affairs Office at West Point. One AIAD sent three cadets to beautiful Cheju Island off the southern tip of the peninsula, and the other opportunity saw four cadets venture to Yonsei University in the heart of Seoul. Both AIADs were highly successful, so we look to revisit these AIADs in the future.

The Cheju AIAD was a six-day culture and language immersion experience hosted by the faculty of the Department of Geography Education (DGE) at Cheju National University. The DGE provided students and faculty “guides” for tours of various sites that described the geography (physical and human) and history of Korea and Cheju Island. Faculty members from the Departments of Veterinary Medicine and Computer Science provided accommodations in their ultra-modern condominiums in the shadow of Hallasan, the 1950 m high shield volcano that looms in the center of the island. Some of the major highlights included an 18 km trek to the top of Hallasan, a visit to the Jeju Development Center for International Free Commerce, and a tour of Sanggulsu, a Buddhist temple with spectacular views of the East China Sea. The cadets were also introduced to the local economy including visits to tea and orange growers and traditional Korean ceramic artisans. The trip concluded with a tour of the facilities in the DGE and a luncheon with the Dean of DGE.

The AIAD to Yonsei University was hosted by the 501<sup>st</sup> Military Intelligence Brigade and centered around five weeks of intensive Korean



*(Left to right) Cadets James Womack, Peter Kim, and Daniel Kim and their student guides from Cheju National University on Cheju Southern coast.*

language training at the university. Yonsei is known as “The Harvard of Korea,” so it is one of Korea’s most highly regarded academic institutions. The cadets lived in the Yonsei dorms and had eight hours of language classes daily. The class discussions were at a very advanced level and involved conversations about politics, the military, and the economy. Their classmates included several other members of the military to include Army, Navy, and Air Force linguists. The cadets learned a lot of about the different services and their related military intelligence missions through interface with these service members. The cadets also interacted with numerous international students who were members of their class. Being situated in the center of the vibrant city of Seoul, the cadets became immersed in the local culture and learned about many aspects of the Korean way of life. They also gained a great appreciation for the world-class mass transit system in Korea’s primate city.

## **Balkans**

### **LTC Steven Oluić**

The Department of Geography & Environmental Engineering conducted one of the Academy’s more unique AIADs this summer. LTC Steven Oluić and four cadets, Nick Cosmas (08), Brian Hewko (08), Casey Miller (08), and Greg Rueth (09) traveled across Serbia, Bosnia and Herzegovina and Croatia. The goal of this trip was to familiarize the cadets with the Serbo-Croatian lan-

guage and to obtain a better understanding of a region devastated by the Yugoslav wars of succession in the 1990s.

The 21-day odyssey began in Belgrade, Serbia where the cadets received focused language instruction from University of Belgrade Faculty, visited the US Embassy, the Serbian Military Museum and Kalemegdan Fortress, and enjoyed a Danube River cruise. Perhaps two of the more interesting stops were at the royal compound of Beli Dvor, where HRH Crown Prince Alexander II resides, and the Serbian Military Academy. According to General Kovačević, Commander of the Academy, our visit was a first by a delegation from the US Military Academy in the 125 year relationship between America and Serbia. The cadets enjoyed a lunch meal with several Serb cadets in their dining facility. The group also took a one day excursion to Novi Sad where they visited the impressive Petrovaridin Fortress which overlooks the Danube River.

The group departed Belgrade after seven days



*(left to right) Cadets Rueth, Miller, Cosmas and Hewko prepare to enjoy a Bosnian meal overlooking the Neretva River between Sarajevo and Mostar.*

and traveled through Bosnia to Dubrovnik, Croatia before returning to Belgrade through Bosnia. Cadets visited the Srebrenica Memorial Park that commemorates the worst atrocity in Europe's history since WWII in which several thousand Muslim males were killed by Bosnian Serb forces. They also visited the Nova Gradiška concentration camp museum park on the Sava River where during WWII several hundred thousand Serbs, Jews and Roma were exterminated by

Croatian fascists known as the Ustaše. These sites were deeply moving for the cadets. Cadets spent two nights in Sarajevo visiting the old bazaar area, or "Baršarčija," exploring centuries old mosques and enjoying the ambience of the old Ottoman times. From Sarajevo, the group traveled to Mostar where they spent two nights in an apartment overlooking the world famous "Stari Most," or old bridge, that was recently reconstructed after having been totally destroyed in the Bosnian civil war. Here the cadets noted that tensions are still evident between the Muslim and Croat communities.

The group traveled next to the medieval walled port town of Dubrovnik, Croatia where they enjoyed the overwhelming sense of history and Dalmatian hospitality. After two days of experiencing Dubrovnik the group returned to Belgrade traveling through southern Bosnia. During the travel through Bosnia the cadets were able to witness the devastation still omnipresent 15 years since the war's end. Upon exiting Bosnia the group stopped at the southern Serbian city of Niš and visited "Čele Kule," or skull tower - a morbid tower monument constructed of the skulls of rebellious Serbs by their Ottoman overlords. The AIAD ended where it began, in Belgrade. The cadets' unforgettable experience was educational, revealing and downright fun. Hopefully GENE and the Academy will be able to offer the trip as an annual event in the future.

### **Cadets Tour Japanese Cultural Sites Dr. Jon Malinowski**

During late July and early August, I had the pleasure of escorting four cadets to Japan for a 12-day tour of historical sites as part of the Academy's efforts to further global cultural awareness. We arrived in Japan on the 23<sup>rd</sup> of July and after a short night's sleep arose early to tour the Tsukiji Fish Market, the world's largest. We now know exactly what a \$20,000 tuna looks like. After this pre-dawn baptism to Tokyo, we spent three days touring Shinto and Buddhist shrines and exploring Tokyo's many neighborhoods. We also had the opportunity to watch the Tokyo Yakult Swallows lose to rivals the Hiroshima Toyo Carp in a major league baseball battle of the basement. Go Swallows!!

After a few days in Tokyo, we traveled by Shinkansen (bullet train) to Kyoto for two days of touring. We began with a tour of the ancient capital of Nara, home to an amazing Buddhist shrine in the middle of a park full of friendly but hungry deer who hound tourists for food. Returning safely to Kyoto with only minor hoof wounds, we visited six historic sites, including shogun Tokugawa Ieyasu's Nijo Castle and the Golden Pavilion. The diversity of these ancient buildings is spectacular.



*Cadets James Blackwell, David Burris, Bill Lessner, and Ryan McAllister pose in front of the famous gate to Kannon Temple in Tokyo's Asakusa district.*

For the remaining days of the trip, we traveled back to Tokyo and used the city as a base camp for day trips around Tokyo. We visited Kamakura to see the famous giant Buddha (Daibutsu) there, which is truly a site not to be missed. At Kamakura's Tsurugaoka Hachiman Shrine, several cadets urged Hachiman, Japanese God of War, to assist us in beating the sushi out of Navy this season. Moments later, the skies opened in a fierce lightning storm that brought the city to its knees. An omen? Apparently not. We also took day trips to Nikko, a World Heritage Site, and to Hakone National Park, where the cadets were able to see Mount Fuji and eat hard-boiled eggs cooked in sulfuric, boiling spring water until the shells turn black. Overall, the trip was a great success and I'm confident that the cadets have a much better appreciation for this crucial regional ally.

## France MAJ James Chastain

Cadets Bridie Burke, Connor Lawrence and David Groves spent three weeks in Europe this summer exploring the French cultural landscape. The cadets were accompanied by Major James Chastain while they traveled over 2,000 miles through the French countryside.

The cadets started their trip in Paris and continued on to explore the urban and rural areas in and around Honfleur, Bayeux, Ste. Mere Eglise, Amboise, Gien, Sarlat, Carcassonne, Arles, Avignon, and Nice.

Starting in Paris and continuing throughout the trip, the cadets learned about France's urban hierarchy. The special role of Paris as the primate city in France's centralized state system was highlighted through discussions of France's urban growth and morphology as it related to the Seine river. The urban hierarchy theme permeated the entire trip as the cadets experienced French culture in smaller towns and villages. The town of Amboise exposed cadets to the Loire Valley's chateaux and village system as part of the feudal system and was vividly contrasted with France's energy landscape as the Loire Valley doubles as the home to France's nuclear energy plants. In the town of Sarlat, the cadets canoed down the Dordogne river and viewed the river's series of small artisan villages lining the banks as it winds towards Bordeaux and the Bay of Biscay.

The cadets felt that the most important part of the trip was the four days spent on the Normandy



*Cadets David Groves, Bridie Burke, Connor Lawrence with MAJ James Chastain and guide Ellwood von Shieboldt on Utah Beach, Normandy.*

coast. The cadets were able to traverse Omaha and Utah beaches, Pont Du Hoc, and the village of Ste. Mere Eglise. Through their movements and readings on these battle sites, the cadets were more able to understand the military geography of the D-Day assault and the overall concept of the Normandy campaign. Throughout the cadets' time in France they were able to see the geographical topics we discussed in the classroom.

## **Vietnam**

### **MAJ Jason Ridgeway**

Chi, our 18-year old guide in the mountains of northwest Vietnam, does not want to work in the rice paddies. "It's too hard," she says. Instead, Chi prefers to live in the growing market town of Sa Pa, where she shares an apartment with a friend, and where both girls work as guides for



*Cadets Haning, Grant, Xie and Tisdell with guide Chi studying the physical landscape of north Vietnam.*

Western tourists, shepherding them up and down the steep and magnificent mountain trails that bring Western tourists and their money to one of the poorest parts of Vietnam. And even though Chi remits most of her money back to her family in the tiny ethnic village of Ta Van, she prefers the opportunities of Sa Pa to traditional life in her hamlet. Her family isn't so sure, though. "They are afraid I will lose my culture," she confides after taking us to visit the two-room, dirt floor home where her mother lives with Chi's brothers and sisters.

Chi's situation is emblematic of the entire

country of Vietnam, which is home to both hand-sown rice paddies and ritzy high-rises like those in Ho Chi Minh City, formerly known as Saigon. With the old and the new side by side, Vietnam is a ready-made laboratory for both physical and human geography, so it was a natural choice for an AIAD. Our group, composed of one instructor and four cadets, spent 15 days touring north Vietnam as part of a culture and language immersion program. From the imposing mountains of Lao Cai province on the Chinese border, to the quasi-religious Ho Chi Minh Mausoleum in Hanoi, to the striking limestone towers of Ha Long Bay on the northeast coast, our group traversed the breadth of north Vietnam, immersing ourselves in Vietnamese language and culture.

This kind of immersion, of course, provides the kind of education you could never get in a classroom. Hanoi is full of reminders of Vietnam's long history, with the ancient Temple of Literature just a short walk away from French Colonial Hanoi Opera and the infamous Hoa Lo Prison, better known to Americans as the Hanoi Hilton. And juxtaposed with Vietnam's past is its present, a real-world lesson for cadets in globalization. Rather than read a dry text about the new market reforms that are rapidly connecting this formerly centralized economy into the global markets, cadets were able to see this transformation up close. Cadets saw shoe-shine boys and post-card hawkers compete with upscale Western restaurants for tourist dollars, and signs of both poverty and newfound affluence are everywhere. "It was an incredible experience," wrote Cadet Katelin Grant, an Environmental Science major from the Class of 2008. This was the first time most of the cadets had visited a developing country, and the experience will benefit them for a long time to come. After all, it's easy to forget the words you read in a book or hear in a classroom, but the lessons of a trip like this are likely to remain indelibly printed in the memory.

## **India**

### **MAJ Brian Doyle**

"Incredible India" is the marketing slogan used by the Indian Ministry of Tourism. Over the course of sixteen days, five cadets and one faculty advisor got to find out exactly how incredible

India is. This trip, generously financed by the Association of Graduates, sought to give cadets a better understanding of cultural diversity of the second most populous country on Earth.

The trip spanned many different regions and environments as it covered over 1,515 miles of railroad, highway, and airspace across the sub-continent. Time was spent in major urban areas to include New Delhi, Mumbai and Hyderabad as well as smaller cities and rural villages. The cadets were able to discern the significant differences between the densely populated government center of New Delhi, the more cosmopolitan business oriented city of Mumbai, and the growing technology center that is the city of Hyderabad. All along the rich cultural history of India was evident in the architecture and landscapes encountered. Cadets were able to observe and study this history as it transitioned between Hindi, Mongol British and the present-day global influences.

As part of the initial orientation to India, the cadets were invited to the US Embassy in New Delhi where LTC Rick White (USMA '84) arranged an informational brief from the embassy staff to include the Political and Economic Affairs division, USAID, the Drug Enforcement Administration and the Military Attaches office. This provided an excellent base of knowledge for the cadets to truly begin their exploration of India within the context of the role of the United States.

Cadets gained a tremendous appreciation for the religious diversity in India. Over the course of the trip they visited Sikh Temples, Islamic

Mosques, a Baha'i House of Worship, Buddhist Temples and many Hindu Temples. They had an opportunity to interact with many of the people visiting and working in these places of worship and all walked away with a tremendous understanding of the common ground amidst the diversity.

Although many beautiful monuments were visited – to include the Taj Mahal – the true value of this trip was found in the interaction with the local people. Traveling by bicycle rickshaw the cadets navigated the narrow streets of Old Delhi, still vibrant and teeming with people. The common comment heard from the cadets was along the theme of sensory overload as the sights and smells of this city bombarded them with every turn of the head. This same scene was repeated in many other cities and villages as simple meanderings among the crowded stalls and booths of a vegetable or spice market turned into a global awareness of the differences and commonalities between all of us.

In Hyderabad global connections were made all the more obvious as we toured many of the new technology related businesses that populate that city. We saw software companies with customers spanning the globe, and the call centers that were receiving inquiries from the global market.

Above all this trip brought to life many of the themes that these cadets have been studying and reading about over the course of their time with the department. India provided the cadets with an understanding not only of global diversity, but of the diversity even within countries.

### **In Closing**

The geography program at West Point is ever changing, exciting, and dynamic. Everybody who is a part of this program, both past and present, both cadets and faculty, has influenced it in some way. We are lucky to have a continued influx of extraordinarily talented and professional people. Through continued creativity and dedication the program thrives, and contributes greatly to the discipline of geography, to USMA and the Army. Special thanks to Dr. Amy Richmond for crafting our department's newsletter input. Go Army, and Go Geo!



*Cadets Sara Drane and Mary Ann Kearney explore Old Delhi by Bicycle Rickshaw.*



## Colonel Jason Lynch Program Director

Hi there dear friends and Happy New Year! So glad that you have taken the time to spend a few moments to see what's been going on in the environmental engineering and science program. We have lots of good things to share with you that have happened since the last update so please keep reading! In the interest of being 'green' and conserving budget though I will keep the length of this update shorter than last year.

First, let me share with you some recognitions achieved by our cadets. Reaching back to a 2005 graduate whose announcement didn't make it in time for the last update is 1LT Sean Healy who was selected as a 2006 Mitchell Scholar. Sean was in Iraq when he found out but has since returned to begin studies in Dublin City University, Ireland where he will obtain a masters degree in international security and conflict. After several years of effort Dr. Mike Butkus was successful in getting our majors recognized by the Tau Beta Pi Honor Society and recently notified 14 of our graduates (going back to 2002) that they are eligible for induction in this prestigious organization. Cadets Russel Raines, Class of 2008, and Tylor Bott, Class of 2009, are our most recent Tau Beta Pi inductees. During the 2007 USMA spring awards convocation Cadet Brandon Woerth, an environmental engineering major, received the Order of the Founders and Patriots of America Award for excellence in environmental engineering studies while Cadet Jeremy Stratman, a geospatial information science major, received the National Organization of the Ladies Auxiliary to the Veterans of Foreign Wars of the United States Award for excellence in the environmental engineering sequence. The Class of 2007 was

also the first able to graduate with honors and Brandon Woerth and Joseph Block met the criteria to do so. Currently on track for graduating with honors in the Class of 2008 are Katelin Grant, Scott Yang, and Russell Raines. Lastly, I am happy to report that ten of the eleven 2007 environmental engineers successfully passed their Fundamental of Engineering Exam and are now recognized engineers in training.

Next I would like to highlight several special recognitions earned by members of the environmental program. First, Dr. Mike Butkus and MAJ Bill Epolito were awarded the Best Conference Paper (out of 1,468 papers) by the American



*Environmental program cadets and Dirtman help clean up Wirt Robinson Memorial.*

Society for Engineering Education (ASEE) for the paper they presented at the 113th Annual ASEE Conference & Exposition in Chicago, IL. Their paper was titled Development of an Environmental Biological Processes Course in an Undergraduate Environmental Engineering Curriculum. Dr. Marie Johnson was presented with the United States Military Academy's inaugural "Mike Krzyzewski Teaching Character through Sport Award." Coach Krzyzewski was on hand to personally present the award at a cadet mandatory dinner to Coach Johnson for her many years of mentorship and service to the Army Women's Lacrosse Team. MAJ Mindy Kimball was selected as the Department of the Army 2007 Women's History Month Science Technology Engineering and Math (STEM) Role Model Award recipient. MAJ Kimball was recognized



*LT Tim Holland in Afghanistan.*

during the Department of Defense observation of National Women's History Month at the Women in Military Service for America Memorial in Arlington, Virginia. MAJ Phil Dacunto with LTC Mike Hendricks were runners up for the Academy's 2007 Apgar Teaching Award for their work integrating information technology to illustrate atmospheric dispersion better in EV397, Air Pollution Engineering. Lastly, but definitely not 'leastly' MAJ Bill Epolito and MAJ Ben Wallen successfully passed the professional engineering exam in environmental engineering and are now licensed professional engineers.

This past year we held our first ever Cadet Graduation Awards Ceremony as part of the Class of 2007 Graduation Week festivities. The event was extremely well attended by our majors and their guests who really appreciated the opportunity to meet each other and see the cadets get personally recognized. MAJ Ben Wallen was a major contributor in putting together a slide show to music that captured the Class of 2007 throughout their time at West Point – to include digging out pictures of them from R-Day! This presentation (immortalized on a CD) and a mouse pad with our faculty's smiling faces made up two of the items given to every graduate as a graduation keepsake.

The Class of 2007 included six environmental

science and eleven environmental engineering majors. We also had the opportunity of positively influencing 168 environmental engineering sequencers in the Class of 2007 and they leave us with a better appreciation of how environmental issues are Army issues and the application of science and engineering to solve complex problems. Regardless of their reason for being in our classrooms we are proud of their accomplishments as cadets and wish them well in their service as Army officers. Our numbers continue to grow with 19 environmental majors in the Class of 2008; 27 in the Class of 2009 and 28 in the Class of 2010. We hope to inspire this trend to continue as we improve getting the word out to the Corps about our disciplines and the value of our majors. As you know, cadets have a way of making each day worthwhile and it has been a treat to watch them grow and develop. One of the biggest compliments we continually see in surveys and emails is how much they appreciate what our faculty do for them in and out of the classroom. As an example here is an excerpt of an email I received from LT Tim Holland currently serving in Afghanistan as a Medical Service Corps environmental engineer. "I really feel like I was more than prepared for everything that I have run into over here and I think that is because of everything that I did back at school in all my different

classes. Thank you for helping get me into this and allowing me to succeed at doing it. I don't think I would be happier in any other position or with any other unit." I thank each of you for your contributions to this and for all the other feedback I have received about our fine faculty.

Some of the projects cadets worked on and presented last year during Project's Day include The use of phosphate to prevent lead migration at firing ranges, environmental security analyses of Cuba, Guatemala, and Lebanon; biodiesel at West Point, cultivating *Daphnia Magna* for drinking water threat detection, Jefferson Hall's green energy initiative, green roof implementation at West Point, and Pershing Barracks human-environmental awareness SPiRiT prototype. Already completed this year are two additional independent study projects – one on altering energy consumption practices at Fort Bragg and the other on geophysics searching for the cannons buried in The Plain.

Nineteen cadets took advantage of advanced individual academic development opportunities offered by the environmental program this past summer. Sponsors include the US Army Corps of Engineers, the Federal Emergency Management Agency, the Army Environmental Center, and the Army Aberdeen Proving Grounds Test Center. Cadets traveled to such places as Hawaii, Alaska, Florida, New Mexico, and Massachusetts where they were able to work first hand on issues such as base remediation, IED hazards, Hurricane Katrina support, and flood recovery. This year our program will also offer its first multidisciplinary AIAD in Guatemala to work with Water for People to look at water supply issues and to also take in some of this country's cultural and environmental landscapes. Overseas AIAD opportunities are becoming more numerous as the Army places increased emphasis on cultural awareness and language and have even extended into cadets conducting semesters abroad. Currently we have Colin Jones, an environmental engineer, in Mexico; Jen Wardynski, and environmental scientist, in Jordan; and David Reyes, another environmental scientist, in Brazil.

Closer to home, our cadets were involved in other activities as well. Examples of some of the annual events are the fall welcome back BBQ and the Firstie Boat Ride (which last spring because

of a torrential downpour moved indoors). New items included a social mixer for our Yearling majors with our Second Class cadets, a fall "pre-TEE dinner and a movie" in our auditorium and rotunda, and a guest speaker presentation by Mr. Paul Dolan on integrating sustainability in wine-making (with Firstie wine tasting afterwards). Cadets also took time restoring the Wirt Robinson Memorial located on the hillside northwest of Arvin Gym and downhill from the Jewish Chapel. The monument was dedicated in the 1930s by the head of the Cartography department (a predecessor to the current department of Geography and Environmental Engineering) to Wirt Robinson, a



*Environmental program AIAD to Hawaii – note the happy smiles!*

naturalist and former professor in the department.

Our program's Board of Advisors continues to meet with us annually to discuss the status of the environmental engineering program and to offer recommendations on keeping the program current and vibrant. This visit is even more important this year in that the Class of 2008 serves as our record year for a reaccreditation visit to occur in the fall, 2008. Some of the key outcomes of the meeting included concurrence from the BOA that we are fulfilling our program objectives; that a forum where cadets meet with board members be continued; and that the concept of sustainable engineering education should be con-



*Environmental program Board of Advisors wrap up this year's session.*

sidered as a way of keeping the program current and in tune with expectations by employers of our graduates. We executed many of these recommendations to include submitting changes to the environmental engineering major, having several of our faculty participate in workshops on integrating sustainability into our courses and majors, and taking advantage of the opportunities our board members offered to the program. Departing our Board at the expiration of their terms were Mr. Robert Adamski, P.E. DEE (Gannett Fleming Engineers and Architects, P.C.) and COL Robert Thompson, P.E. (U.S. Army Human Resources Command). Newly appointed to the Board are COL Laurie Cummings (Ft Meade MEDDAC and Kimbrough Ambulatory Care Center) and Ed Hampston (Division of Environmental Remediation, DEC, NY).

The people that make up the environmental faculty continue to lead by example in scholarship and service. This past year our faculty presented their work at annual conferences of the American Society of Engineering Educators, the Geological Society of America, and the Association of American Geographers. Examples of publications here and other refereed venues include "Near Surface Geophysical Investigations of the Hayward and Green Valley Faults" by MAJ Mindy Kimball, "Inactivation of the Avian Influenza Virus (H5N2) in Typical Domestic Wastewater and Drinking Water Treatment Systems" co-authored by Dr. Mike Butkus, "Providing a Synergistic Educational Experience – A Case Study Using an Environmental Engineering Sequence" by MAJ Ben Wallen, "A Better Way to Illustrate Atmospheric Dispersion in the Class-

room" co-authored by MAJ Phil Dacunto, and "Spatial Variation of Sulfate Reduction Rates in Saline Lake Sediments" co-authored by COL Joe Manous.

From a service perspective let me share with you some of the activities with which our faculty are involved. Internally COL Joe Manous continues to serve as the Army Cross Country and Track officer representative. LTC Mark Smith serves as an officer representative of the Native American Heritage Forum and an academic officer representative for the Army Football team. MAJ Gayle Davis serves as the officer representative for the Rabble Rousers and MAJ Mindy Kimball serves as the officer representative for the Theater Arts Guild. Serving as assistant officer representatives are MAJ Eric McAllister and MAJ Ben Wallen for the Army Wrestling and Army Women's Basketball teams respectively. Beyond service for cadets the faculty also dedicates its time



*Cadets Steve Aoyagi and Travis Boltz present their independent study project during Projects Day.*



*Dirtman, Dirtwoman, and other members of the department family cheer on the Class of 2011 during their march back from Camp Buckner.*

to making the local community better by serving as coaches, pack leaders, religious leaders, and other types of volunteers. The faculty is engaged outside the walls of West Point as well. Examples include COL Joe Manous serving as the chair of the ASCE Committee on Professional Practice, Dr Mike Butkus serving as the Chair of the Education Committee of the Association of Environmental Engineering and Science Professors, and Dr. Marie Johnson serving as an editor for the Journal of Geoscience Education.

As with every year this one brought transitions to the environmental program faculty. On the positive side, two officers joined the environmental faculty in 2007. MAJ Dave Roux, E.I.T.,

is a Field Artillery officer who joins our faculty with his wife Mijin and one year old son Isaiah. MAJ Roux holds a Masters degree in environmental engineering from the Johns Hopkins University. CPT(P) Adam Czekanski, E.I.T., is a Corps of Engineers officer who joins our faculty with his wife Wendy and newborn daughter Annabelle. Before arriving at West Point, CPT(P) Czekanski completed a Masters degree in environmental engineering from the University of Texas Austin. On a sad note, departing from our faculty were MAJ Bill Epolito and MAJ Phil Dacunto. MAJ Epolito is now attending the Air Force ILE at Maxwell Air Force Base, Alabama and MAJ Dacunto is attending the Army ILE in Fort Leavenworth, Kansas. We wish both of them and their families much success and many good things in 2008.

Well, that's it for this year. As I walk the hallways I cannot help but see the faces of our faculty and cadets constantly changing. Cadet classes and faculty cohorts have come and gone but one thing that remains constant is the quality of the people who have left their imprint not only in Washington Hall but also on the hearts and character of everyone sharing the West Point experience. I thank you for sharing, for caring, for making this a better place to work and learn. You truly Rock the Black and Gold!!



*Class of 2007 graduates and faculty during the Environmental Program Graduation Ceremony.*



**Dr. John Brockhaus**  
**Program Director**

The past academic year was both a busy and productive one for the GIS program. Faculty were fully engaged in the education and mentoring of cadets as well as with outreach to the Army. In addition to our classroom activities each of the GIS faculty served as Officer Representatives or OICs for various cadet athletic teams and clubs to include: the women's softball team, the orienteering club, the women's tennis team, and the rabble rousers. We were fortunate to have an addition to the GIS faculty this year. MAJ Hannon Didier joined the GIS faculty this past summer. Hannon is an Aviation officer and received his M.S. in Environmental Science from Louisiana State University. This sustains the number of GIS faculty at six: one civilian professor, two academy professors and three rotating instructors.

Once again we are very fortunate to have Mr. Joseph Harrison of the US Army Topographic Engineering Center, Ft. Belvoir, Virginia on the GIS faculty. Mr. Harrison is currently on his second year long assignment as a visiting scientist at

the USMA. He continues to serve as an instructor and as a conduit for information exchange to academy faculty and cadets. Mr. Harrison graduated from Shippensburg University with bachelors and master's degrees in geo-environmental studies and is now a doctoral candidate in Earth Systems and Geo-information Sciences at George Mason University.

Our outreach activities to the Army continue to increase. The Yuma Proving Grounds continues to support the research efforts of LTC Fleming regarding the development of GIS capabilities for installations in Panama, Honduras and another in Alaska. The work in Central America this past year involved two cadets, one a double major in GIS and Spanish, as well as MAJ Ian Irmischer. CPT Will Wright, presently completing the Masters degree at the University of Florida, was the officer on site in Alaska overseeing the work of two cadets majoring in GIS. LTC Fleming has also established a cooperative relationship with the ERDC and the Engineer School at Ft. Leonardwood to acquire state of the art equipment to be used in several of the GIS courses and during cadet summer field training at Camp Buckner. Additionally, LTC Fleming has developed a working relationship with the Program Executive Office for Simulation Training & Instrumentation (PEO-STRI) of the Research Development & Engineering Command in Orlando, Florida. This relationship has already provided dividends to the GIS program in the form of a high resolution geospatial modeling and simulation data base of the Academy. PEO-STRI has agreed to support two cadet AIADs this summer to continue the development of the West Point data base. LTC



*Current GIS Faculty and Family at GENE Department Christmas Party '07.*



*Cadets Tanya Duester, Jiajing Thach and Dmitriy Shekyman complete their horizontal curve layout lab for EV380 (Principles of Surveying).*

Hendricks is conducting cooperative research with faculty in the Modeling and Simulations division of the Dept. of Systems Engineering dealing with spatial database mining issues. Additionally, he is working on a research project funded through the Army Topographic Engineering Center dealing with digital elevation model resolution requirements for command and control systems. LTC Hendricks has also received funding from the Army Topographic Engineering Center to support work on the development of an Urban Tactical Planner database for West Point. Dr. Brockhaus continues to conduct geo-spatial research for the National Geospatial Intelligence Agency.

GIS faculty continued to be active professionally. Presentations were made at the following conferences this past year: the American Society for Photogrammetry and Remote Sensing Annual Conference, the BAE Systems SOCET SET User's Conference, the Army Geospatial Conference, the Geographic Information Sciences Conference, and the ESRI International User's Conference. While at the ESRI International User's Conference the USMA GIS contingent set up a West Point booth as part of the Academic GIS Fair. This drew the attention of numerous old grads attending the conference as well as some

youngsters interested in attending the academy.

MAJ Christopher Oxendine, Masters degree in Geography from the University of Wisconsin, left us after three years of exemplary service to the program and the department. While here Chris course directed, taught and made significant improvements to EV378-Computer Cartography and EV379-Photogrammetry. Chris oversaw the integration of state-of-the-art innovations in digital photogrammetry into our photogrammetry class keeping this course well ahead of similar undergraduate courses offered at other universities. In addition, Chris also taught EV203-Physical Geography and EV489A-Advanced Individual Study. The example that he set in and out of the classroom, his dedication to excellence, humor in the classroom and ability to communicate with cadets will be sorely missed.

## Academics

Thirteen cadets marched across the stage this past spring to receive their degree in Geospatial Information Science. Several of these cadets completed independent study projects during the spring term. Projects included the generation of digital elevation models from stereo satellite imagery, 3-D feature extraction from satellite imagery, and the georegistration of non-planimetric map databases. Cadet Jeremy Stratman was selected as this year's recipient of the Environmental Systems Research Institute Annual Award for Excellence in Geospatial Information Science. A new academic award was established this year to recognize excellence in digital photogrammetry. BAE Systems Inc., the world leader in the development of digital photogrammetric software, graciously agreed to sponsor this award. Dr. Stewart Walker, marketing vice president, came to the Academy from San Diego and presented the award at the GIS graduation ceremony. The award includes a commemorative plaque which will have the name of each cadet selected engraved on it as well as a complimentary one year license for BAE's SocetGXP image analysis software.

The program maintains its breadth and depth in the discipline through the eight technical courses that GIS majors take as part of their graduation requirements. Required courses in-



*Cadet Hartman collects GPS data with an ATV-mounted receiver during her AIAD in Alaska.*

clude: EV377-Remote Sensing, EV378-Computer Cartography, EV379-Aerial Photogrammetry, EV380-Principles of Surveying, EV398-Geographic Information Systems, EV477-Advanced Remote Sensing, EV478-Military Geospatial Operations, and EV498-Advanced Geographic Information Systems. Our courses in remote sensing and geographic information systems can now be found on the electives list in three other departments: Civil and Mechanical Engineering, Systems Engineering, and Electrical Engineering and Computer Science.

### **AIADs**

Several cadets participated in Advanced Individual Academic Development (AIAD) projects this past summer. Cadets John Hughes and Dan Smith each spent three weeks in Panama supporting the development of an operational GIS capability at the proposed tropical test site facility. CDTs Jeralee Hartman and Josh Bracher worked with Integrated Training Area Management personnel at Fort Greely, Alaska. CPT Will Wright, incoming GIS instructor in the fall of 2008, was on site for this AIAD as well. BAE Systems Inc. sponsored CDT's Nathan and Jonathan Dyer, affectionately known as the Dyer twins, at their headquarters in San Diego, California. When not at the beach Nate and Jon spent their time evaluating the new upcoming release of the SocetGXP image analysis software. CDTs Nick Lewis and Rebecca Moschel spent three weeks at the Army Topographic Engineering Center and the National

Geospatial Intelligence Agency (NGA) College at Ft. Belvoir, Virginia. While at the NGA College the cadets were given the opportunity to observe and participate in several GIS training courses ranging from remote sensing to surveying.

### **Geographic Sciences Laboratory**

The Geographic Sciences Laboratory (GSL) continues to be the heart and soul of the GIS program. This year we lost our classroom, room 5200 Washington Hall. Expansion of the Department of Foreign Languages forced us to depart the classroom that had been the home of the GIS courses for close to twenty years. However, COL Palka was able to convince the Dean to provide funding to build a new classroom next to the GSL. For those of you familiar with the footprint of the department in Washington Hall the new classroom was created using the "storage" room outside of Mr. Goetz's office and half of the back of the GSL. The small office in the back of this space, adjacent to the computer technician's office, is now being used to house all of our surveying and photogrammetry equipment. All in all this was a great move! We have more space than in the old classroom and now all of our facilities are in one centralized location. An added bonus was that the audio/video capability of the new classroom is state-of-the-art. Kudos to COL Palka, LTC Fleming and LTC Hendricks for seeing to it that this new facility came to be in a timely manner.

New GPS equipment has been added to the GSL as well as new software to enhance the courses offered in the GIS program. Corporate and Department of Defense support of the GSL continues to be strong. The Environmental Systems Research Institute (ESRI) renewed the unlimited site license for all of their geographic information systems software products. This enables us to continue to allow cadets enrolled in our courses to use this software on their personal laptops and desktop computers. We also continue to offer this software to other academic departments as well as infrastructure support organizations on post such as the DHPW and ITAM offices. BAE Systems supports our photogrammetry course through the donation of SocetSet software licenses to the GSL. Visual Learning

Systems has provided a site license for both their Feature Analyst and Lidar Analyst software programs. These programs are being used in the Advanced Remote Sensing course. The National Geospatial Intelligence Agency (NGA) continues to be an integral supporter of the GSL. Funding provided by the NGA has allowed us to acquire several pieces of equipment that could not be supported by the Academy. NGA support enabled us to acquire additional software assets and to upgrade our Real Time Kinematic surveying capabilities. This equipment upgrade will impact each of our courses and enhance the support of cadet and faculty research projects. Additionally, support from the NGA enabled CDTs Nathan and Jonathan Dyer to attend the ESRI International Users Conference in San Diego, California.

The US Army Topographic Engineering Center has committed a significant amount of funding and resources to the acquisition of LIDAR imagery over the entire military reservation. This collect included two distinct data sets: 1) a terrestrial collect where the LIDAR sensor was mounted on a vehicle and oriented so as to capture building facades in the main part of post as well as Camp Buckner; and, 2) an aerial collect that will be used to generate a bare earth digital elevation model of the USMA. Additionally, the Topographic Engineering Center has provided image processing software and imagery that has allowed us to expand the scope of topics addressed in our courses. In addition to providing us with the modeling and simulation data base discussed earlier SPO-STR1 has donated software that will enable faculty and cadets to edit existing modeling and simulation data bases and to generate new data sets.



**LTC Mike Hendricks  
Officer Representative**

The West Point Orienteering Team enjoyed another successful year, highlighted by capturing

their fourth consecutive U.S. Intercollegiate Varsity Championship once again last spring in Harrison, Ohio. Other events of note included hosting the 28th annual orienteering meet on the West Point training area at Camp Buckner, instructing over a hundred scouts at the 3rd annual Boy Scout Orienteering Merit Badge Workshop, assisting the Academy's intramural orienteering program, and of course traveling to numerous orienteering meets.

**Intercollegiate Champions**

In spite of travel challenges from snow in the Northeast, 22 cadets were able to assemble in Ohio from their various spring break locations to compete at the Intercollegiate Orienteering Championships, organized by Orienteering Cincinnati under the oversight of the US Orienteering Federation. The Varsity competition was dominated by a USMAOC team comprised of CDTs Andrew Komm ('07, D3, Club CIC), Chelsea Cunningham ('07, F3), Aaron Fairman ('07, F3), Neal Trump ('09, H1), and Dan Keyser ('09, G3). A USMAOC team of CDTs Jake Cook ('07, B3), Sarah Klaben ('07, C3), Zach Taron ('07, E1), Ben Bruder ('09, H1), and Paul Freeman ('09, G3) also took second place in the Varsity competition.

The Junior Varsity competition was won by a USMAOC team consisting of CDTs Nick Fuhri-man ('10, B4), Alex Reiter ('10, G4), Matt Scrivner ('10, B3), Paul Caston ('10, E3), and Ruben Veliz ('10, B2), and the second place went to CDTs Eric Flowers ('09, E3), Heidi Miller ('09, G2), Nick Lewis-Walls ('10, A3), and Josh Wiley ('10, C4).

The cadets also excelled individually this past year. West Point cadets Andrew Komm ('07, D3, Club CIC), and Sarah Klaben ('07, C3), captured for the first time ever, both the male and female individual titles. In addition, Chelsea Cunningham placed 2nd place in the female Varsity category, Heidi Miller captured the 1st place female Junior Varsity Champion award, Nick Lewis-Walls ('10, A3) achieved the 2nd place men's Junior Varsity Champion award, and Alex Reiter ('10, G4) won the 3rd place men's Junior Varsity Champion Award.



*USMA's 2007 Orienteering Team - Intercollegiate Champions*

### **West Point Meet and other Activities**

The team hosted their 28th Annual West Point Orienteering Meet April 28th and 29th 2007. Cadets Sarah Klaben and Brad Hutchison, the meet directors, ensured the meet was a success for the over 300 competitors from all over North America. The Geography & Environmental Engineering Department supported the event by printing the competition's maps in the Geographic Sciences Laboratory which saved money and allowed greater flexibility.

In addition to holding our annual competitive meet, the cadets hosted their annual Boy Scout Orienteering Merit Badge Workshop April 14th and 15th. Cadet Kyle Stilwell, who initiated this popular workshop three years ago, again planned and organized this event and received excited praise from the over 200 scouts in attendance. Cadets Heidi Miller and Madeline Lewis also got involved in community service and taught orienteering to a local Girl Scout troop on the grounds of the West Point Middle School.

The orienteering team over the past year has continued to increase their support to land navigation and orienteering training at the Academy. The team supports the spring intramural orienteering program by providing mapping and course preparation assistance as well as classroom instruction and field training to company coaches and referees. These efforts have substantially increased the effectiveness of intramural orienteering to the over 200 participating cadets. New this upcoming year is a winter sprint orienteering program which the team is supporting with map production, course setting and general oversight. In addition to these activities, the team

continues to assist the Corps by providing subject matter experts to land navigation training throughout the year.

### **Mapping and GPS Technology**

The orienteering team leveraged its connection with the Department of Geography this year in a number of technological ways. The team purchased, through a research grant with the Geospatial Science Program, 24 electronic punch devices that allows the team to improve its navigation training, research navigation strategies, and ensure that cadets become familiar with the operation of these devices which are a critical component of a successfully hosting our meet in the spring.

In conjunction with a research grant with the Defense Intelligence Agency (DIA) the team also purchased wrist GPS training units (Garmin model 305s) for all 30 cadets and officers on the team. These devices allow the team to track cadet routes, speeds, and heart rates in the forest while training and competing. This capability gives the cadets a training edge while at the same time exposing them to geospatial information capabilities they may employ in their Army career.

The orienteering maps of West Point have been in need of updating for a number of years. Department personnel have worked over the last few years georeferencing and updating the orienteering maps of West Point. In addition, MAJ Jon Campbell, the team's current coach, worked tirelessly to produce a sprint standard map of the cadet area to be used for winter intramural orienteering for the first time this year.

## 2007-2008 Team

The team conducted a successful tryout at the beginning of the semester and picked a strong team, six of which are majoring in the Geography & Environmental Engineering Department. CDT Christopher Beckwith ('08), Benjamin Bruder ('09), Paul Caston ('10), Ross Chesaniuk ('11), CDT Eric Flowers ('09 – GIS major), CDT Nikolaus Fuhrman ('10), CDT Adam Janetti ('08), CDT Daniel Keyser ('09), CDT Jordan Laughlin ('11), Jaridd Leute ('10), CDT Madeline Lewis ('09), CDT Nicholas Lewis-walls ('10 – Geography major), CDT Zachary March ('10), CDT Lon McBride ('09 – Environmental Science major), CDT Heidi Miller ('09), CDT Michael Norris ('11), CDT Aaron Palmer ('08), CDT Justin Pettit ('11), CDT Alex Reiter ('10), CDT Andrew Scholle ('11), CDT Ryan Schubert ('11), CDT Ben Scrivner ('08), CDT Matthew Scrivner ('10), CDT Shawn Soviak ('10 – GIS major), CDT Kyle Stilwell ('08, CIC), CDT Jason Trump ('11), CDT Neal Trump ('09 – GIS & Geography major), CDT Ruben Veliz ('10), CDT Joshua Wiley ('10 – GIS & Civil Eng major), and John Williams ('10).

The following faculty members returned from last year to help out again with the team: LTC Mike Hendricks (G&EnE, OIC), MAJ Jon Campbell (Physics, Training Coach), MAJ Victoria Campbell (History), LTC(R) Richard Hoff (Chemistry and Life Science), MAJ Hannon Didier (G&EnE), and MAJ Robyn Wood (Math). LTC (R) Robert Turbyfill continues to volunteer time and effort to the club while traveling from Washington D.C.

## 2007-2008 Events and Trips

The USMA Orienteering Team competed in a national-level Sprint orienteering race on 22 September 2007 and the orienteering Relay Championship on the 23rd of September in Connecticut. At the Sprint race on Saturday, CDTs Jordan Laughlin (11, D3) and Michael Norris (11, A2) took 1st and 2nd place, respectively, in the male 16-18 age category, and CDT Paul Caston (10, D1) took 3rd place in the male 18-20 age category. At Sunday's Relay Championship, the Team's top four-person-relay took 8th (out of 17

teams) in the 4-point category, and 9th (out of 15 teams) in the 8-point category.

Over the 01-02 October 2007 weekend, the Team faced a weekend of tough races in the complicated, glaciated terrain of New Hampshire. After two days of competition, CDT Neal Trump ('09, H1) had the combined winning time in the male 19-20 year-old category, and CDT Jordan Laughlin ('11, D3) took second place in the male 17-18 year-old category. Then the following weekend a contingent competed in the 26.3km Hudson Highlander race. Jordan Laughlin finished 4th and Zach March finished 6th. Shawn Soviak, Paul Caston, and Michael Norris all completed the race in under 5 hours.

On November 4th, 2007 the team competed in two US Orienteering Federation individual national championship events held in Prince William Forest near Quantico, Virginia. Friday, 2 Nov, at the Sprint-venue race, CDT Neal Trump ('09, H1) took 2nd place in the male 19-20 year-old category. Over two days of competition on Saturday and Sunday in the Classic-distance venue, CDT Jordan Laughlin ('11, D3) took 3rd place in the 17-18 year-old category, and CDT Neal Trump ('09, H1) edged into 3rd place (19-20 category) by a mere second over a combined two days of competition, totaling 2 hours and 45 minutes.

The team is planning a full schedule of orienteering in the spring which includes the following major trips: The Georgia Navigator Cup Appling, GA 18-19 January, the 2008 U.S. Intercollegiate Championships, Tucson, 22 – 24 February, Sprint and Long Championships Hamilton Ohio, 4-5 April, our Boy Scout Orienteering Merit Badge Workshop, West Point, NY 11-13 Apr, Relay Championships, Rochester New York, 19-20 April, and finally our West Point Annual Orienteering Meet, West Point, NY, 03-04 May. For those cadets who perform exceptionally well, the U.S. Team Trials will be held in Bethlehem PA 24-25 May and the World University Orienteering Championships will be held this year in Estonia 28 July – 3 August.

For additional information please visit the clubs web site at [http://www.dean.usma.edu/Departments/geo/clubs/o\\_team/](http://www.dean.usma.edu/Departments/geo/clubs/o_team/)

## Current Faculty, Department of Geography & Environmental Engineering

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**COL Joe D. Manous**, Academy Professor and Deputy Head; Ph.D., University of Minnesota (Environmental Engineering), 2000; M.S., University of Illinois (Civil Engineering), 1989; B.C.E., Georgia Institute of Technology (Civil Engineering), 1980; B.S., North Georgia College (Physics), 1980; P.E., Commonwealth of Virginia, 1984

**COL Laurel J. Hummel**, Academy Professor and Program Director, Geography Program; Ph.D., University of Colorado, 2002; M.S.S., US Army War College, 2006; M.Ed., University of Alaska Anchorage, 1999; M.S., Pennsylvania State University, 1991; B.S., United States Military Academy, 1982

**COL Jason C. Lynch**, Academy Professor and Program Director, Environmental Engineering Program; Ph.D., University of Florida 2002; M.E., University of Florida 1993; B.S., United States Military Academy, 1984

**Dr. John A. Brockhaus**, Professor and Program Director, Geospatial Information Science Program; Ph.D., University of Idaho, 1987; M.S., California Polytechnic State University, 1980; B.S., California Polytechnic State University, 1978

**Dr. Marie C. Johnson**, Professor, Environmental Engineering; Ph.D., Brown University, 1990 AB, *magna cum laude*, Harvard College, 1985

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**Dr. Michael A. Butkis**, Associate Professor, Environmental Engineering; Ph.D., University of Connecticut, 1997; M.S., University of Connecticut, 1995; B.S., United States Merchant Marine Academy, 1989; P.E., State of Connecticut, 1997

**Dr. Peter P. Siska**, Associate Professor, Geography, Ph.D., Texas A&M University, College Station, TX 1995; Ph.D., Comenius University, Bratislava, Slovakia 1984; MS., Comenius University, Bratislava, Slovakia 1978; BS., Comenius University, Bratislava, Slovakia 1974

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