



## From the Department Head



### HAPPY NEW YEAR!

This is my first Systems Connection as the Department Head. I feel humbled and proud to serve such a dedicated, professional and outstanding group of staff, faculty and cadets. I consider it a privilege and honor to hold this position – Go Systems!

This has been a year of incredible transition for the department. We said a fond farewell to several tremendous leaders and educators whose profound impact remains. **BG(Ret.) Mike McGinnis** and his wife, Tracy, turned over the reins

of DSE on 2 June when they retired after 29 years of faithful active duty service to our Army, including seven years of distinctive leadership to the department. **BG(Ret.) McGinnis** is now serving as the Executive Director of the Virginia Modeling, Analysis & Simulation Center (VMASC) at Old Dominion University in Virginia Beach, VA. **LTC(Ret.) Willie McFadden** and his wife, Sheila, also retired in June after six years of service to the department. Willie was instrumental in assisting **BG(Ret.) McGinnis** to move the department forward, and was honored in a promotion to full Professor of Engineering Management before he departed West Point. Willie and Sheila are enjoying life in Huntsville, Alabama where Willie works for Booz Allen Hamilton, Inc. **Dr. Bobbie Foote** and his wife, Sharon, retired (again!) after five years of service in DSE. They are

now enjoying life in Colorado close to children and grandchildren. We also retired **LTC(Ret.) Brigitte Kwinn** after 22 years of incredible service to the Army, the department and Soldiers. Brigitte is still in the area as **LTC Mike Kwinn** remains in DSE as our Systems Engineering Program Director. Brigitte is busier than ever as mom to four beautiful daughters, including three that she and Mike recently adopted.

While we were sad to see these terrific leaders go, we proudly welcomed 12 new faculty members this summer. Two new senior faculty members joined us, **LTC Donna Korcynski** and **Dr. Tim Elkins**. Donna joins us from Fort Knox and the Accessions Command as an Academy Professor and is serving as the Engineering Management Program Director. Tim is the new USMA Chair for Transformation

*(continued on back page)*

### Department Highlights

- US Patent Issued, March 2006
- DSE Published New Textbook, June 2006
- Warrior Protection Workshop Hosted, July 2006
- 12 New Faculty Members, July 2006
- COL Tim Trainor Selected Department Head, August 2006
- EM Ranked #1 - Again!, October 2006
- General Donald R. Keith Endowment, October 2006
- Website redesign, December 2006

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## Systems Engineering (SE) & Operations Research (OR)



by LTC Mike Kwinn

For better or worse, I have entered the revolving door that has been the Systems Engineering and Operations Research Program Director. I am the fifth different program director in the last five years and I am a little concerned that I am being setup to be fired, but am going to try to hang on a little longer than one year because I love it, baby! It is great to be back in a classroom and I have always admired and envied the previous SE/OR program directors. I hope I can honor them in my tenure.

Fortunately, I will have a great team! We return with **COL Kent Miller**, **Dr. Greg Parnell**, **Dr. Pat Driscoll** (last year's SE/OR Program Director), **MAJ Tom Rippert** and **MAJ Terry Barron**. All have been in this program before, are well-seasoned and have continued to fire cadets up about Systems Engineering and our courses. Without this continuity, we would

have been left to my good ideas and initiative and quite frankly, we would have been declared dead by now.

We do not have the services of **Dr. Roger Burk** this term unfortunately. Roger is taking his sabbatical to coincide with my return to the Department – well actually, he claims to have had this planned. I believe him because that is the only way I can drag myself from the depths of depression is because he is working in a prestigious program down at Princeton University. He is working on a study there on teaching engineering to non-engineering students. I would have picked an easier sabbatical topic, but Roger's dedication is why we are longing to have him back next year.

We have done pretty well in the draft however and have two great replacements arriving this year. **MAJ Melanie Carlson** arrived and immediately dove in under the tutelage of COL Miller in SE375 (though I am not sure if she is challenging her underperforming cadets to feats of physical daring as her mentor does). She is also doing research for the Defense Security Cooperation Agency and for USMA on the Cadet Barracks status. She is doing great in this program and in the Department.

Our other addition is **MAJ Steve Gauthier**. His last name is

pronounced pretty much anyway you want since he is from New Orleans, but he pronounces it "Go Shay!" much like a cheer. He even brought his own cheering section with wife Elizabeth and three boys. Having felt this was not enough however, Elizabeth eventually relented and gave birth to a beautiful girl almost immediately upon arrival at USMA! For his part, Steve is teaching SE485, getting ready to take over the S1 job, is the co-lead on the AIAD program, and is doing research for the Army Environmental Program Office.

Through the work of the entire program, we put on the 1<sup>st</sup> Systems Olympics as our Welcome Back bash at the end of this summer at Lake Fredrick! It was a lot of work for everyone except me, so I thought it turned out great! Seriously, we all pulled together and it was quite a great event to start the academic year.

I have been blessed to have taken over a great program with a great deal of potential. We are turning our interest to our ABET accreditation for which next year will be the year of record. Other than that, we are all just living the dream and trying to keep the momentum going from all those who made this into a great program in the first place. If you have suggestions, please let me know. ♦

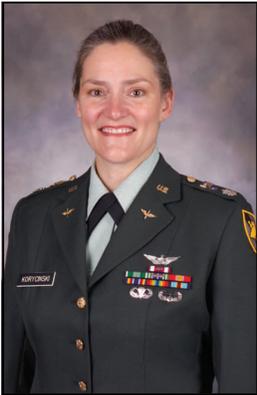


*Before joining Systems, MAJ Melanie Carlson was a graduate student at the University of Virginia, Charlottesville, VA. Prior to grad school, she was assigned to Bamberg, Germany, providing finance support to the 1st Infantry Division.*



*Prior to joining us in DSE, MAJ Steve Gauthier was a graduate student studying Operations Research at the Naval Postgraduate School, Monterey, California.*

## Engineering Management (EM)



by LTC Donna Korycinski

This past year has been a year of change for the Engineering Management (EM) Program. I was honored and humbled to have been selected to take the reigns of this awesome program from **COL Trainor** as he made his transition to Department Head. This past summer, the EM program welcomed four new instructors to its ranks: **MAJ Scott Crino**, **MAJ Chad Jagmin**, **MAJ Mike Rainey** & **Mrs. Christy Gelineau**, with **Dr. Paul West** and **MAJ TJ Lindberg** as our rocks of stability as we all got our feet on the ground this first semester.

**Dr. Paul West** continues to break new ground, even after 12 years in DSE! He continues to internationalize his Capstone teams by integrating exchange students from France's St. Cyr Military Academy into his AY06 and AY07 projects, providing a rich cultural experience for both the

U.S. and French students. Paul and Cheryl had the privilege this summer of pinning Captain's bars on their son, Joshua (USMA '03), who, with his wife, Natalie, was wrapping up an assignment with the 3<sup>rd</sup> ID. Their daughter, Kelly, lives in Fredericksburg, VA, with her husband, Bill Fletcher.

**MAJ TJ Lindberg** is a third-year instructor in the EM program. He, his wife Renee, and their three children, Owen, Paige & Mason, will be PCSing this coming summer to ILE at Ft Leavenworth with a follow-on operational assignment within the Engineer Branch. Congratulations to Renee who was recently recognized for her volunteer service by being awarded the USMA Black and Gold Volunteer Award at a ceremony on 14 December.

**Ms. Christy Gelineau** joined EM this summer although she has been at West Point since January. She and her husband, CPT Joe Gelineau who works in the DPE, came from Indiana University. Her background is in mechanical engineering, specifically the structural health monitoring field. Congratulations to them on the birth of their son, Campbell Jacob Gelineau, who was born at Keller ACH on 7 November.

**MAJ Scott Crino** comes to us from the University of Virginia where he received his Ph.D. in

Systems Engineering. He is currently the Course Director for EM420 (Operations Management) and is advising a capstone research group. Scott is married to Kristen, and has three children Lauren (8), Dominic (6) and Angelo (2).

**MAJ Chad Jagmin** came to DSE from the Department of Civil and Mechanical Engineering (CME). He is the DSE faculty mentor for the USMA Mini-Baja Project and the OIC for Army Racquetball. He will be leaving at the end of the 2007 academic year to work in Operations Research for the Army, probably in the National Capitol Region.

**MAJ Michael Rainey** comes to EM from the University of Texas at Austin, Civil Engineering Department where he was part of the Construction Engineering and Project Management program with **CPT Marc Distefano**, who will be joining DSE this coming summer. Mike is married to Lisa, and they have one son, Jackson (11 months).

EM set a record this past semester when 76 cadets from the Class of 2009 selected EM as their major. In addition, EM is preparing for and will be undergoing ABET reaccreditation in 2008. As a new Program Director, I am open to feedback and learning how we can make this great program even better! ♦



MAJ Scott Crino



Mrs. Christy Gelineau



MAJ Chad Jagmin



MAJ Mike Rainey

## Information Engineering (IE)



by LTC Robert Kenley

This is a year of transition for the Information Engineering Program. Last summer, **LTC Bill Bland** gave up leadership of the program so he and his family could move to Fort Knox, where he currently serves as an analysis chief for US Army Accessions Command. Bill was instrumental in the design and direction of this program, and his skills are sorely missed. I took over as Program Director from Bill and quickly became immersed in its many challenges.

Attracting cadets into this program continues to be a challenge given the other fine options at West Point. Based on limited enrollments, we have decided to forego ABET accreditation next year so that we can focus on restructuring and marketing the program to increase its enrollments. Among several options, we are considering rolling Information Engineering up as a track within the Systems Engineering major. This mirrors a transition at other undergraduate institutions such as the University of Southern California and Massachusetts Institute of Technology. In addition, we will continue to focus our efforts on a greater understanding of the value and role of information in military and civilian command and control systems. We are offering, for the first time, a Command and Control Systems course that will focus cadets on the challenges of integration, interoperability, collaboration, security, and evaluation of modern command and control systems.

As a backbone of continuity, **LTC Brian Sperling** continues to direct our Decision Support Systems and Computer Aided Systems Engineering courses. In these areas, cadets are learning new skills in data mining, 3-dimensional modeling and visualization, and collaboration. They will be able to apply these skills in their senior capstone design courses. The program was blessed this summer with the arrival of **MAJ Ed Teague** (*photo page 5*), his wife Frannie, and their kids Madison, Jacob, and Elena. If Ed wasn't busy enough teaching System Simulation, he spared a few minutes to rush Frannie to the hospital in September just in time to deliver Francis Joy, one of the newest members of the Systems family.

Never hesitate to call me with your feedback and ideas on this program. Best wishes and good health wherever this newsletter finds you. Please stay in touch. ♦



### *General Donald R. Keith Endowment*

*BG Finnegan, DSE Board of Advisor members, and DSE faculty and staff attended the GEN Donald R. Keith Endowment Award Ceremony on October 20, 2006. Retired General Donald R. Keith (Class of '49) provided the endowment to the department.*

*An award for the best student graduating from the Systems Management Program will be given annually in GEN Keith's memory. The endowment will significantly enhance cadet education programs for many years to come. The honorary ceremony was attended by GEN Keith's son, LTC(Ret.) Michael Keith and his family.*

*Pictured from left to right, Mrs. Carolyn Keith, LTC (Ret.) Michael Keith, and COL Tim Trainor.*

## Systems Management (SM)



by LTC Rod Roederer

Let me begin by publicly congratulating **COL Bob Powell** for his promotion to Colonel in October. COL Powell is the Program Director for the SM program; however, this year he is attending the Naval War College. During his absence, I am serving as the Program Director.

One of the two courses managed by the SM program is SM421, Systems Acquisition Management. SM421 is a required course for both SM majors and Engineering Management majors. With the increased enrollments the department is experiencing, the projected SM421 enrollments are also increasing. These increased enrollments require an additional instructor. I am pleased to introduce the newest member of the SM team, **MAJ**

**Guy Huntsinger.** Guy joined the SM program, and the department, this summer. During his previous assignment as a graduate student at Texas A&M, Guy earned his Masters Degree in Industrial Engineering. Guy hails from Houston, TX and is accompanied by his wife Dana, daughter Caitlyn (8), and sons Wyatt (5) and William (3). Guy is a 1997 USMA graduate and former Army football player.

There are many exciting events transpiring for the SM program this year. The most exciting is that we will have our first graduating class. The members of the Class of 2007 have been working hard, and are now in their final year of the new SM curriculum. Not only will we graduate our first class, but during Graduation Week 2007, we will also present the first annual award of The General Donald R. Keith Memorial Award for Excellence in Systems Management. This award will be presented annually to a Systems Management major in recognition of superior academic and military performance as well as the demonstration of ethical conduct above reproach. The award is named in honor of the late GEN Keith, a former AMC commander, whose family

provided a generous endowment to our department in his name.

We continue to strive to make our courses challenging and relevant. To the SM421 course mentioned above, we are adding a course project. We will use Lego® robotics software and hardware with which the cadets will build an unmanned ground vehicle (UGV). Along the way, they will be required to provide the usual documentation and analysis required by current Defense Acquisition policy. We will culminate the project by having the cadets negotiate an obstacle course with their UGV's!

Another first this academic year is the offering of SM401---the single-semester, integrative capstone course in the final semester of the cadet experience. This year, we will have 16 Firsties working in four-person teams. Currently, we plan to have the cadets work on projects for the Keller Hospital Laboratory, and the 30<sup>th</sup> AG Reception Battalion at Ft. Benning, GA.

This is just a quick snapshot of the exciting progress in the SM program. Guy and I hope all of you have a successful New Year! ♦

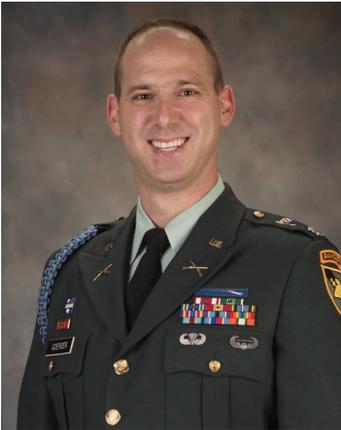


*Major Ed Teague is an integral part of the IE program this year. Prior to joining Systems, Ed was a graduate student at University of Texas. He earned his Masters in Operations Research.*



*Prior to joining Systems, MAJ Guy Huntsinger was a graduate student at Texas A&M. He earned his Masters in Industrial Engineering.*

## Operations Research Center of Excellence (ORCEN)



by LTC Simon Goerger

Yes, it's been another wonderful year of seeking insight from the dark corners of the universe.

The ORCEN continues to find solutions and make recommendations to clients in need. As we enter into another calendar year of exciting and evolving research, the ORCEN is looking forward to this semester's activities while we reflect on the first semester's research endeavors.

As with last year, I continue to travel to meet with clients, attend workshops, or present our Department's work at conferences. I am always humbled by the interest and praise for the work and capabilities of the DSE faculty, staff, cadets, and facilities. Word is spreading across the globe as more of our faculty and graduates rotate into the operational Army. The research the DSE team performs is exciting and timely. I can scarcely imagine an atmosphere more adept and capable of performing the complex task of researching Army issues and educating future leaders in the manner in which the Department does from week to week and year to year.

**LTC Dale Henderson** has been keeping the four ORCEN" (often pronounced 'oarsmen') rowing away in the research ship. Dale runs the day

to day operations in the ORCEN and routinely attends DSE meetings when I am traveling. In his spare time he has been coding an application for the Armed Forces-CARES: Armed Forces Casualty Assistance Readiness Enhancement System II. He is also researching topics for the Joint IED Defeat Organization (JIEDO) as part of the research team headed by **Dr. Niki Goerger**. This work is performed when he is not editing the DSE textbook, moving into Lee Housing, or making faculty, staff, and families cry with his "farewell" music videos.

Placing his engineering knowledge to work and pushing data mining techniques to the brink of the research frontier, **MAJ Paul Evangelista**, has been spending the majority of his time researching topics with **Dr. Goerger** and **LTC Henderson** for the JIEDO in an attempt to assist our deployed forces in dealing with this peril. Many hours a day, Paul can be found hunched over mountains of digital data attempting to dig, filter, and clean nuggets of information. Paul is also working with **LTC Henderson** on a budget model for PEO Soldier to help identify the appropriate levels of funding required for future years.

When he seeks a break, Paul and **MAJ Steve Gauthier** sit down to manage the Academic Individual Advanced Development (AIAD) program for the Department. These two young men have been working many long hours to help develop a viable and exciting slate of 2007 AIADs for DSE cadets. As you may already have read, Paul is never satisfied with a mere twenty-four hour day, filling his free time by completing his PhD program at the Department of Decision Sciences Engineering Systems, School Of Engineering, Rensselaer Polytechnic Institute. Paul was also selected as the recipient of the Seventeenth Annual Interservice/Industry Training, Simulation and Education Conference (I/ITSEC) Graduate Student Scholarship doctoral winner.

**MAJ Greg Griffin** has been attacking several projects in the ORCEN in attempt to address counter insurgency issues from both a data mining aspect, as well as through modeling and simulation. Greg has been working with **Dr. Goerger** and the Engineer Research and Development Center (ERDC) to assess the effectiveness of traffic Control Point strategies using agent based simulations. Greg and Niki



**ORCEN Team Academic Year 2007**

*from left to right: MAJ Evangelista, MAJ Griffin, Ms. Higgins, LTC Goerger, LTC Henderson, and MAJ Kramlich*

## Operations Research Center of Excellence (ORCEN) *continued*

plan to transition this work to other combat simulations during the spring of 2007. But Greg is not limiting his efforts to the analytical assessment of tactics; he has also been working with **MAJ Greg Boylan** on the Army M&S Installation Facilities Layout Study (Phase II) to provide the Army with a model which will help determine needed capabilities of virtual simulation facilities intended to train future Soldiers and their leaders in the use and implementation of digital weapons systems.

As a true infantry officer, **MAJ Gary Kramlich**, the ORCEN's Math Department Analyst, went straight to the arms room and has been busy working on developing a means to measure the wear on small arms (pistols, rifles, and light machine-guns) in order to help the Army predict when weapons are likely to malfunction or need replacement.

Taking information from a myriad of sources and applying sound analytical techniques, Gary is developing a set of metrics which has the potential to revolutionize how the Army approaches the maintenance of small arms. When he is not talking with armors and product developers, he is assisting the PEO Soldier program by coordinating the modeling and simulation efforts of three separate entity level combat simulations which will be used in the analysis of future capabilities for the ground Soldier.

The ORCEN support system is managed by **Ms. Nancy Higgins** who joined us as our administrative assistant. She is helping to juggle numerous administrative duties such as preparing the Systems Department's Academic Year 2006 Research Plan and its Academic Year 2005 Research Report.

In conjunction with their other Department duties, **LTC Dan McCarthy** and **MAJ Steve Gauthier**, have been working with the ORCEN during the past semester. As part of their numerous activities, they assisted in making the 2006 Systems Tailgate another exemplary event. With statistically significant effect, the team increased its social status by sponsoring not one, but two tailgates, in one day at the 49er Lodge. The tailgates were a department highlight with music, food and beverage, games for faculty, staff, cadets, family, friends — even the Army mules! We thank all those who were able to participate.

Whether it is research, education, leading or relaxing, the ORCEN continues to perform its role in helping DSE meet its vision and mission. We look forward to continuing to do so over the next semester! ♦

## DSE Board of Advisors



**20 October:** 15 members of the DSE Board of Advisors (BOA) attended the annual advisory meeting to discuss the current and future goals of the department. The BOA is a distinguished group of individuals which includes senior leaders from academia, government, and industry.

## Core Engineering Sequence (CES)



by LTC John Halstead

The Core Engineering Sequence (CES) appreciated the stewardship and leadership of **LTC (Ret.) Brigitte Kwinn**, and in August 06 said farewell, wishing her (and Mike) continued success in their recent adoption of three children. Brigitte led the CES through major change and established an individual cadet assessment process, which the department intends to apply throughout its programs.

The CES continues to adapt to a changing environment, while dedicated to providing sequence cadets the best systems engineering experience possible. Systems engineering continues to grow as a body of knowledge. In its growth, systems engineering contributions extend into multidisciplinary subjects, value-driven decisions, and systems thinking. Tremendous opportunity exists to apply systems engineering within many of the Academy's other academic programs. One example is the social science application of social network theory to the identification and targeting of terrorists and terrorist organizations. The department responded to systems engineering growth by publishing a new systems engineering textbook

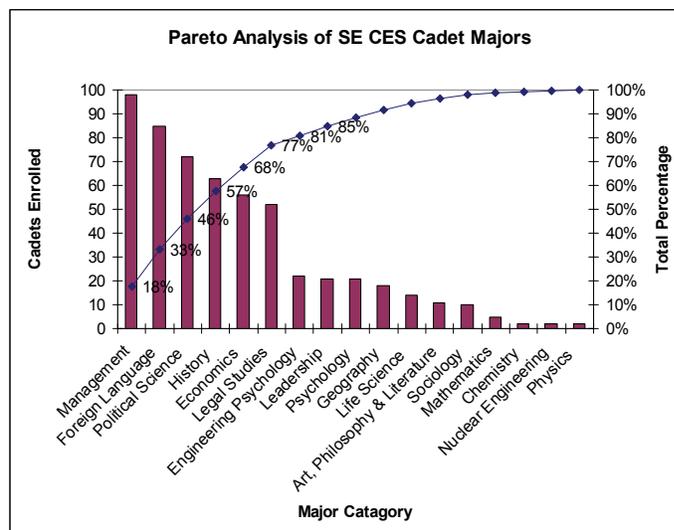
that captured elements of value decision making, the military decision process, and industry's best practices. The combination of multidisciplinary growth and a new value decision oriented textbook motivated a simple question: "Could we redesign CES to enhance the value delivered to major stakeholders?"

**LTC John Halstead, Ph.D.** and **Dr. Patrick Driscoll** are applying the department's new Systems Decision Process (SDP) with the previous question in mind. The vast and diverse stakeholders are predominately cadets and the cadets' academic major departments. The Pareto Analysis of our cadets' majors identified stakeholders belonging to the following departments: Behavior Sciences and Leadership, Social Sciences, Foreign Languages, History, and Law.

With these stakeholders, John and Pat are leading the CES through another change with the objectives of: delivering value to non-systems engineering majors in their disciplines; conceptualizing the systems sequence as three successive 40 hour workshops; and encouraging and enabling

cadet innovation and creativity. These objectives equip CES graduates with necessary and value added skills as they man platoons within the Army. Equipped, they will have the potential to solve relevant and important problems for the nation.

Assisting with the change is a new and talented group of assistant professors and instructors. **MAJ Greg Boylan** and **MAJ Ernie Wong** joined CES from the ORCEN. Ernie is the SE350 course director and Greg instructs CES design projects in SE450. **MAJ Martin** remained in the CES and is dual-hatted as the department operations officer and SE300 course director. **LTC John Willis**, after enjoying a furlough with TRAC-Monterey, rejoined the faculty and is also dual-hatted as the department executive officer and course director for SE450. A very talented analyst from Recruiting Command blessed the CES; **MAJ Ken Gilliam** instructs in SE300. The program is extremely grateful for the augmentation it receives from **LTC Rod Roederer** (SM Program) and **LTC David Dinger** (Dean). Rod instructs in SE350 and David instructs in SE300. ♦



## USMA Chair for Transformation



Since January 2006, **Dr. Tim Elkins** has been serving as the United States Military Academy's Chairman for Transformation. He also holds an appointment as Assistant Professor in the Systems Engineering Department. His academic credentials include a B.S. in Chemistry from Centre College, and an M.B.A. and Ph.D. in Management Science from Rutgers University.

The Office of Force Transformation under the Office of the Secretary of Defense recently designed a set of initiatives under the title of "Education for Transformation and Information Age Leaders". A main initiative in this effort is the positioning of special Transformation Chairs at defense education institutions. Dr. Elkins' position is multi-purpose intended to foster education and collaborative research within and between defense educational institutions. The Transformation Chair is expected to advise USMA

leadership on issues associated with aligning institutional elements to support defense transformation, to develop, in collaboration with other Transformation Chairs and USMA faculty, Information Age & Defense Transformation content appropriate for inclusion in curricula, and to motivate and facilitate USMA-based research efforts as part of the DoD Transformation Research Program.

Prior to joining USMA, Dr. Elkins taught at New York University, where he is still an Adjunct Professor of Operations in the Information, Operations, and Management Sciences Department, Stern School of Business. Prior to joining NYU he taught at Rutgers University. He is also the founder and principle of Davidson Consulting. He serves on the board of directors of the Association for the Advancement of Educational Research (AAER), is a member of the Institute for Operations Research and Management Science (INFORMS), the Military Operations Research Society (MORS), Decision Sciences Institute, and the honor societies Beta Gamma Sigma and Omega Rho.

Elkins' academic interests emphasize teaching, as he enjoys the classroom. Courses taught include: Operations Management, Production & Operations Management, Deterministic Optimization Models, Statistics, and Calculus, on the graduate and

undergraduate levels. Dr. Elkins' research is applied and involves efficiency assessments and multiple criteria, multiple objective, and dynamic decision analysis utilizing data envelopment analysis techniques. He has published a number of papers on these topics and has also contributed chapters to a forthcoming text on forecasting using Microsoft's EXCEL.

He also brings more than ten years of corporate experience to his new position, having worked for such companies as Konica and Hoechst Celanese Corporation. He has held management positions in Quality and Supply & Distribution, and his consulting work primarily involves business process improvement and efficiency. ♦

### SYSTEM CONNECTION GOING PAPERLESS

In an effort to provide you with the most timely DSE news and information, we'd like to email you *The Systems Connection* newsletter.

If you or someone you know is interested in receiving this newsletter and other DSE updates, send your email address to:

**SEWEB@usma.edu**

Additional information about the Office of Force Transformation (OFT)

can be found online at: [www.oft.osd.mil](http://www.oft.osd.mil)

## Engineering Management Program Ranked #1 in Nation

27 October 2006

The American Society for Engineering Management (ASEM) recognized DSE as having the best undergraduate Engineering Management program in the Nation for 2006. This is the second year in a row that the Engineering Management program has received this recognition.

In addition to this award, the DSE Student Chapter of ASEM was recognized as the first runner-up for the best Student Chapter of ASEM.

Dr. Charles Keating, former President of ASEM, also presented COL Trainor with an ASEM meritorious service award in recognition of his service as the Dissertation Prize Committee Chairman for ASEM. ♦



Left to right: COL Tim Trainor, Cadets Jeff Cho, Bryan Adams, Kenny Vaughn, and LTC (Ret.) Willie McFadden.

**The protection of our warriors in current and future operations is a major priority.**

## Warrior Protection Workshop Hosted in July

The protection of our warriors in current and future operations is a major priority throughout the Department of Defense. Efforts are underway to improve the level of warrior protection through active measures such as tactics, techniques and procedures (TTPs) and passive measures including personal protective equipment (PPE) and vehicle armor systems. Additionally, the medical community is conducting far-reaching research on the cause and effects of warrior injuries and ways to mitigate the physical and psychological trauma of hostile attacks and accidents. The scope of these efforts can be condensed into four major domains: materiel

development, training, medical, and operations/intelligence.

In an effort to bring DoD leaders together to focus on this issue, DSE hosted the Warrior Protection Workshop. The group shared related insights, initiatives, and lessons learned. Keynote speakers at the workshop included BG R. Mark Brown, the Program Executive Officer (PEO) Soldier, and COL(P) Ed Cardon, Assistant Division Commander (Support), 3<sup>rd</sup> Infantry Division.

Participants in the workshop focused on the environment in which casualties occur in current operations and how those differ greatly from that of traditional

combat. It was determined that a new understanding of the current “casualty-producing system” is necessary to disrupt the system before, or to mitigate the effects after a casualty-producing event.”

The workshop was considered a success by all participants. Moreover, a new understanding of the current casualty-producing system was achieved by exploring the nature of casualty-producing events from the points of view of the warrior, trainer, medical, intelligence, and materiel developer communities.

For more information contact **Dr. Paul West**,  
Paul.West@usma.edu. ♦

## DSE Textbook Published

30 June 2006

The first edition of a new DSE textbook was completed! The thirteen chapters of “Systems Decision Making for Systems Engineering and Management,” Fall 2006 Edition, were researched and written by several DSE faculty members and colleagues from other universities. Contributing members include BG (Ret.) Mike McGinnis, Dr. Greg Parnell, Dr. Pat Driscoll, Dr. Roger Burk, LTC Simon Goerger, LTC Rob Kewley, LTC Mike Kwin, COL Bob Powell, COL Tim Trainor, Dr. Paul West, LTC Dale Henderson, Dr. Ed Pohl, University of Arkansas, Dr. Bob Foote, University of Oklahoma, and Dr. John Kobza, Texas Tech University. The textbook was printed by Wiley & Sons, Inc.

The purpose of the book is to provide a textbook for the first undergraduate course for systems engineers. The textbook describes the techniques department faculty have found to be

the most useful for problem solving.

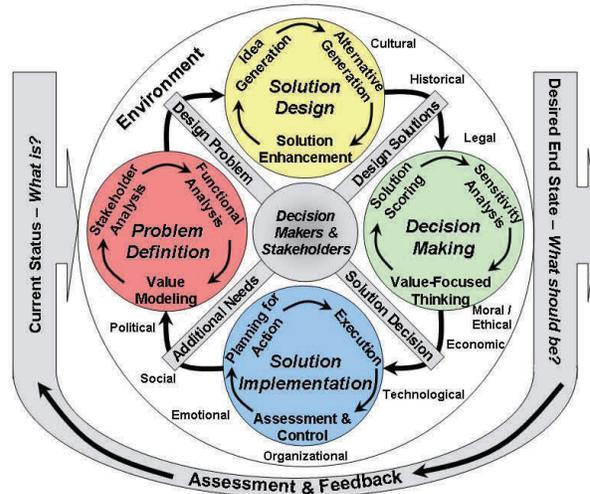
The textbook is divided into three parts – systems thinking, systems engineering, and systems decision making. The book it is currently being utilized in the classroom for both Systems Engineering majors and Systems Engineering sequencers, as well as in the classroom at the University of Arkansas. The text will also be used as a reference for all

capstone research projects.

LTC Dale Henderson just completed the revision of the Spring edition and submitted the manuscript for production in time for the Spring term.

The textbook will be submitted for publication consideration to the Wiley Systems Engineering and Management Series, one of the leading systems engineering technical book series. ♦

**The Systems Decision Process (SDP)**



The SDP model is featured in the textbook. Cadets utilize the SDP to analyze complex systems, problem solve and identify solutions for real world clients.

**THANK YOU to our Distinguished Visitors and Guests (Since January 2006)**

COL Joao Thomaz, Portuguese Military Academy

BG R. Mark Brown, Program Executive Officer, PEO Soldier

COL(P) Ed Cardon, Assistant Division Commander (Support), 3rd Infantry Division

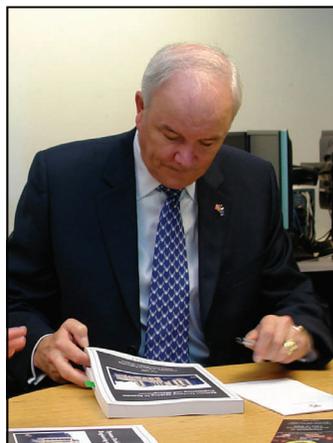
Honorable Michael Wynne, Secretary of the Air Force

GEN (Ret.) Meigs, Director, Joint Improvised Explosive Device Defeat Organization (JIEDDO)

Mr. Geoff Prosch, Principal Deputy Assistant Secretary of the Army (Installations and Environment)

LTC (Ret.) Michael Keith and Family

BG Thomas Cole, Deputy Program Manager, Future Combat Systems (FCS)



**The 21st Secretary of the Air Force**

Honorable Michael Wynne (USMA '66), prepares to autograph the Department of Systems Engineering textbook in which he is quoted on page 107:

*“I have been involved with many milestone reviews as the principal for the Defense Acquisition Board. I see examples of well-run and poorly run projects. The difference becomes clear in the first few minutes of the review. What is also clear is the important role that systems engineering plays in making a project run smoothly, effectively, and efficiently – as well as the contrary, where the lack of systems engineering and the discipline that comes with proper implementation can cause tremendous problems.”*

## More NEW Friendly DSE Faces



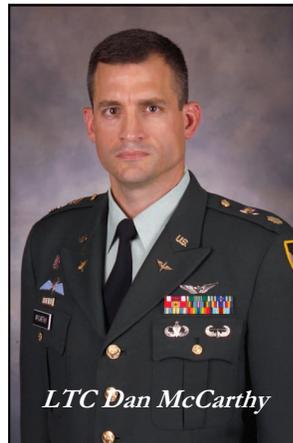
*LTC David Dinger*

Dean/OR/SE300



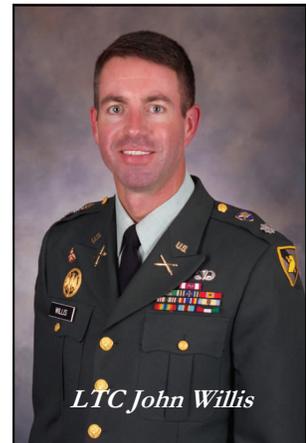
*MAJ Ken Gilliam*

CES program/SE300



*LTC Dan McCarthy*

ORCEN



*LTC John Willis*

XO/SE450

## Snapshots from 2006

**13-15 June:** Several faculty members and recent graduates from DSE traveled to the US Air Force Academy to present their work at the Military Operations Research Society Symposium (MORS). ►



◀ **31 July:** DSE faculty, staff and family members, in conjunction with the USMA Fire Department, supported the CFT Run Back. This is the 4<sup>th</sup> year the department has supported the event. ►



**07 August:** DSE also supported the CBT March Back from the USMA Fire Station, Washington Road. ►



We can't possibly summarize a year in just a few pages! For current news and Systems information, visit our website at [www.se.usma.edu](http://www.se.usma.edu).



**▲ 05 September:** DSE hosted the annual Professional Clubs Open House at Arnold Auditorium. The entire department participated in the event by talking to cadets about Systems programs and clubs. More than 200 cadets attended.



**▲ 07 September:** The Yearling Open House is an open learning forum for any cadets interested in pursuing a major in Systems Engineering. The open house includes technology exhibits, lab demonstrations, cadets teaching other cadets about their experiences in the department, faculty briefings for each major, club information, and more. ▼



**▲ 08 September:** DSE participated in the Engineering Expo at Eisenhower Hall. The event marked another opportunity to inform future Systems majors about DSE



**◀ 14 November:** For almost two years, Systems Engineering cadets have participated in capstone and AIAD projects to examine the overall process of casualty assistance and how it can be improved. As part of the stakeholder analysis portion of their project, cadets Bradwick, Brown, Yancey and Hung (from left to right) interviewed USMA Superintendent, LTG Hagenbeck (center), to determine possible pitfalls in the infrastructure of the casualty assistance program. LTG Hagenbeck's tactical experience as Commanding General of 10th Mountain Division and OPM Director made him a prime interview candidate for these cadets.



*From the Department Head, (continued from page 1)*

and joins us from the faculty of the Stern School of Business at New York University. Other senior faculty members in transition this year include **COL Bob Powell**, who is at the Naval War College in Newport, RI, and **LTC Kelly Ward**, who is at the National War College in Washington, DC. We look forward to Bob and Kelly rejoining the department in summer 2007.

In typical DSE fashion, the department continues to move forward in many areas. These are just a few of our recent notable achievements:

- The Engineering Management Program was recognized as the Best Undergraduate Program in the country for the second year in a row by the American Society of Engineering Management.
- **Dr. Greg Parnell** was selected to Chair an important subcommittee of the National Research Council studying risk analysis methods in bioterrorism for the Department of Homeland Security.
- **LTC Mike Kwinn** graduated with distinction from the Naval War College in June.
- **COL Kent Miller** graduated from the Army War College correspondence program in July and was promoted to Colonel in September.
- **COL Bob Powell** was promoted to Colonel in October.
- **MAJ Paul Evangelista** won a \$10,000 scholarship from I/ITSEC that he used to fund the remaining credits he needed to complete his PhD from Rensselaer Polytechnic Institute, which he did in December.

In addition to these outstanding achievements, we recruited the largest number of new majors in several years from the Class of 2009. Thanks to the terrific work of the entire faculty, led by the Communications Committee Chair, **LTC Brian Sperling** and our Strategic Communications Director, **Mrs. Heidi Hulst**, our final number of majors totals 128. We also hosted several high-level visitors including the **Secretary of the Air Force, the Honorable Michael Wynne (USMA '66)**, who enjoyed an SE301 class taught by **LTC Mike Kwinn**. In October, we received a generous financial boost from **LTC (Ret.) Mike Keith** from an endowment provided by his father's estate, **GEN Donald Keith (USMA '49)**, to support our programs. The senior faculty joined forces to write a textbook on Systems Engineering to codify what the department has developed since our inception in 1989. **Dr. Greg Parnell and Dr. Pat Driscoll** took the lead as the editors of *Systems Decision Making for Systems Engineering and Management*, while **LTC Dale Henderson** did the hard work as copy editor. We have a publishing contract pending with the Systems Engineering Series of Wiley & Sons, Inc.

Although these are just a few of the department's outstanding achievements in 2006, the Systems Engineering team continues to lead the way at USMA. Thank you for the opportunity to catch up with you. We hope you enjoy the newsletter, and we wish you and yours a blessed and fulfilling 2007! ♦

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## Hails and Farewells

### Hail:

MAJ Melanie Carlson  
MAJ Scott Crino  
LTC David Dinger  
MAJ Steve Gauthier  
MAJ Ken Gilliam  
MAJ Guy Huntsinger  
LTC Donna Korycinski  
LTC Dan McCarthy  
MAJ Michael Rainey  
MAJ Edward Teague  
LTC John Willis  
Mrs. Christina Gelineau  
Ms. Nancy Higgins  
Mrs. Heidi Hulst

### Farewell:

LTC Bill Bland  
MAJ Heidi Hoyle  
MAJ Robb Keeter  
MAJ Bob Lenz  
MAJ Doug McInvale  
MAJ Travis Thompson  
MAJ Jason Wolter  
Ms. Linda Albronda  
Mr. Damien King  
Mr. John Kobza  
Ms. Taylor Mrazek

### Retired:

BG Michael McGinnis, June 2006  
LTC Willie McFadden, June 2006  
LTC Brigitte Kwinn, August 2006  
Dr. Bobbie Foote, May 2006