The 9th Annual MOVES Research Summit will be held at NPS

July 21-23, 2009

Keynote Speaker: Dr. John Tangney
Division Director of the Human and Bioengineered Systems Division at the Office of Naval Research

Research Summit Highlights Include:
- Keynote Speaker: Dr. John Tangney of ONR
- Presentations & Breakout Sessions
- Networking Reception with M&S Colleagues
- Research Demonstration Night with Professors and Students

Contact Holly Hatlo, behatlo@nps.edu, in order to register for the conference.

Don’t Miss it!
Director’s Corner: A word from CDR Sullivan

Research Summit
We’re pleased to see such a diverse group of registrants this year, reflecting a full spectrum of sponsors, military professionals, academic colleagues, and corporate partners. Given our unique capabilities and ambitious goals, the Research Summit is a great opportunity to showcase our research and align our research agenda with our sponsors and associates in the fields of M&S and VE. Thanks in advance to all the participants who have signed up and will be joining us in the important conversation this year. A chief part of the Research Summit this year is the Curriculum Review Working Group. The curriculum review is a significant team effort by Mathias Kölsch and Duane Davis working with Army, Navy, and Marine Corps sponsors. Many thanks for their work to ensure that our academic programs meet sponsor’s needs for effective innovators, leaders and managers of next generation M&S/VE technology.

Current Growth Initiatives
We have the privilege of welcoming three new members to our team. Please join me in welcoming LCDR Paul O’Connor to the MOVES Institute. He will be joining MOVES as our new Deputy Director for the duration of his tour at NPS over the next two years. Our appreciation goes to the OR department (where Paul will retain his teaching duties) and HSI faculty for allowing Paul to work as MOVES Deputy. LCDR O’Connor is a native of Scotland and brings to the table a solid background in the field of Psychology and Training/Evaluation of Human Performance. He’s already played a significant role in the preparation and organization of the Research Summit, and we’re grateful for his efforts. Just to keep things interesting, we’ve got another Paul on board, CAPT Paul R. Chatelier (MSC), USN (Ret). He’s been in a supportive role with MOVES for several years as our Board of Advisors Liaison, but will now function more specifically as Senior Advisor on Human Sciences Research and Technology Strategy. The third addition is Dr. Bob Wischer. He’s the former Director of Advanced Distributed Learning (ADL). Dr. Wischer will be coming on staff as a Research Professor. His expertise in ADL will play a crucial role in propelling MOVES toward reaching a strategic goal of making quality education accessible to M&S students in remote locations. Dr. Wischer will be coordinating ADL outreach efforts from his post on the East Coast.

I look forward to meeting many of you at the Research Summit next week.

Where Are They Now? Alumni Update
Featuring: LTC Joerg Wellbrink, German Armed Forces

MOVES Alumnus LTC Joerg Wellbrink, German Armed Forces, has the privilege of stating that he received the very first Ph.D. degree from the MOVES Institute in September 2003. LTC Wellbrink’s thesis was on Modeling Human Performance as a Complex Adaptive System. He is now back in Koblenz, Germany spending time with his five children, volunteering as a worship leader at his church and basking in the natural beauty of his hometown (famous for the intersection of two rivers, the Moselle and the Rhine River). LTC Wellbrink is currently working with the German Ministry of Defense (BONN) in a branch that is responsible for the modernization of German Armed Forces IT. He serves as the Deputy Department Head for communication systems, platforms and networks. His role within BONN includes working on the migration toward the new internet protocol 6 (IPv6) for the German Armed Forces. He also contributes to the procurement of new communications systems (i.e. satellite communication systems) and networks. "One major problem in my business is the lack of a system's view for an entire IT system that includes applications platforms, networks and communication systems. It is very difficult to procure new systems, migrate old ones and to foresee the consequences of problems in projects for the system. Fortunately the background in networking from the MOVES curriculum helps me better understand what to do, and more importantly, what not to do!“ explains LTC Wellbrink. When LTC Wellbrink graduated from MOVES, he was able to put his newly acquired modeling and simulation (M&S) skills to use immediately, “When I returned to serve in the German Armed Forces, M&S was only used for training and education. However, when I was deployed as an analyst to Afghanistan, we had a breakthrough using M&S and Operations Research in the field. Together with my team we successfully convinced our Commanding Officers of the value added by M&S specialists. Among other things, we built a 3D model of the camp and its surroundings. We then used shading algorithms to reveal the so-called “dead spots” (areas where our sensors didn't have a line of sight). This model was used to improve the protection of the camp. This achievement opened a lot of doors for M&S specialist personnel. The German Armed Forces now recognizes MOVES and OR graduates as valuable experts and benefit greatly from their skills. M&S specialists are particularly useful offering their skills during deployment; Commanding Officers find their help to be a valuable asset on the field.” LTC Wellbrink had a very constructive time during his education at the MOVES Institute, “For me, the MOVES Institute is exceptional in

“…The MOVES Institute has helped me support efficient training of warfighters and support the decision making of Commanders in the field.”

-LTC Joerg Wellbrink, German Armed Forces
MOVES would like to congratulate Dr. Mike McCauley for being counted among the top 5% of NPS faculty in this year’s Schiefflin Teaching Excellence Award Poll. Dr. McCauley was among a select few who were nominated by NPS students and alumni as outstanding professors. Dr. McCauley’s dissertation students have produced first-rate results, and his master’s students have also excelled extraordinarily. It is a privilege to have Dr. McCauley at the MOVES Institute; the diligent work he has contributed to his research and to his students is truly commendable.

Chris McClernon, one of Dr. McCauley’s graduate students comments: “Professor McCauley’s passion for education and research is only surpassed by his compassion for his students. He tirelessly entertains even the simplest of questions with a rare breadth and depth of knowledge.

More than a great mentor, advisor, and professor, Dr. McCauley is a great person.” When asked about his teaching method and what he enjoys about being a professor with MOVES, Dr. McCauley shared: “When teaching I try to bridge the gap between theory and application. Most of our students have served in the field, with their lives on the line. I try to focus on application (Continued on Pg. 6)
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  Division Director of the Human and Bioengineered Systems Division at the Office of Naval Research
- Presentations
- Breakout Sessions
- Research Demonstration Night

Topics include:
Human Systems and Training
Cognitive Agents and Adaptive Systems
Computer Gaming, Visual Simulation, Augmented Reality
Next Generation Simulation for Analysis and Training
Web-Based Simulation and Interoperability
Education for Modeling & Simulation Professionals

Agenda

Tuesday, July 21st
- Meetings and Presentations during the day (8am-4:30pm)
- Evening Reception (4:30pm)

Wednesday, July 22nd
- Meetings and presentations during the day (8am-4:30pm)
- Demo Night of faculty and student projects (4:30-6pm)

Thursday, July 23rd
- Meetings and presentations during the day (8am-11:00am)

Please check the MOVES Institute website for the full agenda:
http://www.movesinstitute.org/events.html

NPS Colleagues and Students are encouraged to attend.
Email Holly Hatlo, hehatlo@nps.edu, to sign up!
In May, Dr. Bill Becker found himself in Oahu, Hawaii. However, the purpose of his visit wasn’t to enjoy a tropical vacation. Rather, Dr. Becker spent many long hours observing and participating in the Unmanned Air Vehicle School, RAVEN B course at the Marine Corps Base at Kaneohe Bay. The training was designated for 1st Battalion, 3rd Regiment (1/3) Marines. There were 12 students during the course, along with Dr. Becker and other Naval Research Laboratory participants. The objectives of the training were to teach the 1/3 Marines how to fly, maintain and combat uses for the UAV. Dr. Becker’s work at MOVES involves adapting simulation to fill training gaps in already existing programs. While he was participating in the UAV training, Dr. Becker was taking note of how adding simulated training could address the diversity of skills that could be practiced. “By adding simulation, training of skills that marines would only learn in the field, could now be taught and practiced before going to the field, saving time and damaged aircrafts.” Now that he’s back on the Monterey Peninsula, Dr. Becker is ironing out the specific details of the training paradigm that need to be addressed. He believes simulation training in the following areas could be applied to the UAV training program: learning to observe targets on the ground, night flying, and flying in foul weather conditions, among other things. The program is funded by the Office of Naval Research (ONR). ONR is working to add advanced features to the simulation suite of the Marine Corps DVTE (Deployable Virtual Training Environment) laptop based training system.

Dr. Becker can be reached at: wjbecker@nps.edu

Each Summer, the MOVES Institute hosts student interns for a variety of jobs within the department. It’s a mixture of high school and college students who are eager to gain insight and firsthand experience working in a professional academic setting.

The students are placed under the guidance of faculty members based on their skill and interest. Such is the case for intern Marina Noguiera, a sophomore at York High. She was assigned to work with Dr. Bill Becker when it was discovered that Marina had an interest in biology with an eye toward the medical field. It just so happens that many of Dr. Becker’s projects tie in with physiological training of military personnel. Additionally, Dr. Becker is an expert in artificial intelligence and robotics. Marina’s primary responsibility has been to assemble and program small robots for an upcoming target practice venture. “The robots I have been building are called SumoBots. They are supposed to fight each other, but right now we want them to be able to interact with one another. Eventually, they will be moving targets once they are programmed and all the sensors are working properly,” shares Marina. So far it’s been an exciting learning experience for Marina, “I’m really happy that I was placed at MOVES. I have been learning the basics of how to program the robots and I have gained more experience with circuits. I’ve also learned some troubleshooting skills that have been helpful when the robots aren’t operating the way we planned.” Not only is Marina gaining hands-on skills with the SumoBots, she’s had the opportunity to work one-on-one and dialogue with Dr. Becker about his projects, as well as interact with other MOVES professors and staff.

MOVES is currently employing the following interns: Shannon O’Halloran (Senior, Political Science major at University of Chicago); Eric Helmick (Sophomore, General Studies major at Monterey Peninsula College; interest in pursuing a degree in English); Marek Kapolka (Junior, Computer Science major at San Jose State University); Hector Zhu (Senior, Computer Engineering major at California Polytechnic State University, San Luis Obispo); Noah Lloyd-Edelman (Sophomore, Computer Science major, Japanese minor at Cal State University Monterey Bay); Derek Davidson (Freshman, Secondary Education major at Baylor University); Kathryn Harbins (Senior, Monterey High School; interest in pursuing a degree in marine biology, art and photography); Zack Nissen (Freshman, Computer Science major at University of California Santa Cruz; interested in Engineering/Video Game Design) and Trevor Daunt (Sophomore, University of Santa Barbara, interest in pursuing a degree in Economics/Engineering).
so we can make safer and better systems for our students to use. I hold a great respect for students; I view them as colleagues and professional associates. I greatly enjoy working with students, and that’s why I took on 6 dissertation students at one time this past year (I’ve learned my lesson to never do that again! Though they all finished well and on time). Other aspects of my job that are satisfying include working with the people in this department; teaching international students (their capability and excellence in writing English astounds me. I can’t imagine teaching in Greek!); and teaching distance learning students (it’s very satisfying when I receive an email that one of the students was able to immediately apply what they learned in class for a new program they’re working on).”

from Travis AFB, convinced a commercial software company to modify their code, managed two Certified Flight Instructors, revised the procedures of Monterey Air Traffic Control, and collected all data from the back seat of an aircraft. Chris is the most positive person I have ever had the pleasure to work with in my four decades of experience. He has an unsurpassed combination of exceptional competence and exceptional people skills. It has been an honor to serve as his Dissertation Advisor and Committee Chair.

**Congratulations also on the new addition to MAJ McClernon’s family, a healthy baby boy born on July 14, 2009!**

Many ways. First, I think the multidisciplinary approach within the MOVES curriculum aids progress in problem solving and encourages personal growth. Secondly, the MOVES strategy of combining the skills of academics, industry and military is beneficial for all sides. Militarily, state-of-the-art-technology is being used for warfighters on the right problems. Academically, it helps focus research on the most critical areas. For industry, it is helpful because MOVES can better understand their customers since military personnel ‘speak their language’. Lastly, I enjoyed the work climate within the Institute. Professors seemed to be truly interested in student progress and were willing to learn along with the students. This positive attitude throughout the faculty helped me shape my skills in a supportive yet challenging environment. It also helps that Monterey is the most beautiful place on earth! Overall, my experience at the MOVES Institute has had a positive impact on my career. It’s helped me to support efficient training of warfighters and support the decision making of commanders in the field. And I’m grateful to say that now the skills of German MOVES and OR graduates are better utilized than ever before in the German Armed Forces IT. I am very thankful that I acquired many skills that I can utilize no matter where I serve.”

Experimental data on multiple subjects showing where the eye dwells in the scene. Data then modeled for use to drive a software agent in a simulation.