Executive Editorial
By Dr. John Sokolowski

VMASC continues to provide strong support for students as evidenced by two recent events hosted in our facility. The first of these supported a combined NATO/Allied Command Transformation and ODU event focused on giving students real world decision making experience supported by a simulation driven scenario. Students were drawn from ODU’s international studies and model United Nations programs. They role played key European Union leaders faced with making decisions about response options to various terrorist events occurring in Europe. Simulation provided the story board and the time critical events that shaped their discussions and decision making process. This event was a rare opportunity that students don’t get in a traditional classroom to add to their educational experience.

VMASC also hosted its fourth annual Student Capstone Conference. This event provides M&S students with a venue to showcase their research and to share with their fellow students ideas about how to approach problems using M&S. It follows the ODU multidisciplinary M&S approach. Students from many majors participated from both ODU and other universities. The quality of this year’s papers clearly surpassed those of previous years and is a tribute to the maturing of the M&S discipline from both a research and academic standpoint.

The past month also saw visits by two of the new Governor’s cabinet members, the Attorney General and the Secretary of Technology. In the near future, we will host the new Secretary of Technology for a similar presentation.

Upcoming VMASC Events...

2010 ODU Game Development Summer Camp
July 26-30, 2010 | August 9-13, 2010 | VMASC • Suffolk, VA

Old Dominion University’s VMASC is pleased to announce that it will once again host the 2010 ODU Game Development Summer Camp from July 26 to July 30 and from August 9 to August 13, 2010. Students from many majors participated from both ODU and other universities. The quality of this year’s papers clearly surpassed those of previous years and is a tribute to the maturing of the M&S discipline from both a research and academic standpoint.

The past month also saw visits by two of the new Governor’s cabinet members, the Attorney General and the Secretary of Transportation. Both received briefings on the region’s and the Commonwealth’s M&S activities and gained a much better appreciation for the level of M&S effort taking place especially from VMASC and its industry partners. In the near future, we will host the new Secretary of Technology for a similar presentation.

New VMASC Partnership

Alelo’s brings innovation to new VMASC partnership

Alelo, Inc. has received a contract award to deliver language and culture training technology for handheld devices to the Department of Defense. Marine Corps Systems Command (MARCORSYSCOM) awarded the contract to provide an enterprise level license for the company’s Uku handheld training platform, which delivers interactive multimedia foreign language and culture training programs via handheld devices. These programs are designed to work with Alelo’s game-based learning products, such as the Dari and Pashto language and culture training systems, as well as with the company’s multi-player training program called Virtual Role Players (VRP). These products provide training from basic vocabulary through advanced conversational skills, both prior to deployment and within the area of operation.

Alelo, Inc., a California-based company with an office housed in VMASC’s Suffolk facilities, creates innovative advanced learning products for cross-cultural communication. With a base in Hampton Roads, the company is working closely with U.S. Joint Forces Command (USJFCOM) to implement the use of their Virtual Cultural Awareness Trainer (VCAT) product. VCAT is a game-based cultural learning environment, designed to develop the cultural awareness of personnel who are preparing for deployment. By using game-based scenarios that immerse the player in a believable 3D world, VCAT provides the task-based operational cultural information about the region that is necessary for the successful completion of military missions, including Civil Affairs, Security Cooperation, and Humanitarian Assistance.

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Participants will learn how to make computer games in an easy and enjoyable way, and will develop action games with Game Maker, a popular and intuitive game development tool. They will also learn simple 3D modeling using Uku, a top-down strategy game. The camp consists of interactive lectures and hands-on exercises as well as a game play session each day during which participants can play the latest in education and simulation games for the Nintendo Wii, PlayStation 3, Xbox 360, and other platforms.

The preferred age group is 13-16. Please visit our website for more information about the registration process and fees: www.vmasc.odu.edu/NEWS/2010GameCamp.html

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Student Work in M&S Showcased at VMASC’s 2010 Capstone Conference

The presentations ranged from analyses of the spread of a pandemic, to traffic forecasting, to a study of the arms trade.

Some of the brightest student minds in the field of modeling and simulation showed the judges at the 2010 Student Capstone Conference, hosted by Old Dominion University’s VMASC on Thursday, April 8.

The distinguished keynote speakers for the event were Tuncer Ören, professor emeritus of computer science from the School of Information Technology and Engineering at the University of Ottawa, Canada, and Agostino Bruzzese, professor in the Department of Industrial Production, Thermoeconomic Analysis, Engineering and Mathematical Modeling at the University of Genoa, Italy.

VMASC executive director John Sokolowski said the conference is a great opportunity for students to showcase their work in front of judges who are experts in the field of M&S, both from industry and academia. Sokolowski was impressed by the work the students produced. “Many students contribute to the groundbreaking research that is done at VMASC. This is a good opportunity for them to display their talent,” he said.

Sokolowski said the annual conference, “provides a venue for modeling and simulation students to present their research in a student-only presentation environment.” “It gives them experience in describing their efforts in a clear and concise manner and it provides a venue for participants to see the important work that the students are involved in as part of their academic degree.”

VMASC is a research leader in the field of modeling and simulation, and many of the advances made wouldn’t be possible without the contribution of students. In turn, the students receive valuable experience and guidance from the research faculty at VMASC and have the opportunity to conduct their research in a state-of-the-art venue.

Local industry’s involvement in the Capstone Conference is also key as the growth in M&S research by ODU has helped provide expertise to the many businesses in Hampton Roads working in the region’s growing modeling and simulation cluster.

Besides being hosted by VMASC, the event was sponsored by the Southeastern Virginia Partnership for Regional Transformation (SEVA PORT), Boss Allen Hamilton, Eastern Virginia Medical School, EM Solutions, and Simis.

The winners in each of five categories received cash prizes and the Gene Newman Award, named in honor of Eugene G. Newman, for his efforts in advancing modeling and simulation research, development and education. Newman played a significant role in the creation of VMASC, recognizing the need for credentialed experts in the M&S workforce, the military and industry. Many of those future credentialed experts will come from the ranks of the students whose work was on display at Capstone.

That sentiment was reiterated by Capstone conference keynote speaker Tuncer Ören, who addressed the students at the Capstone banquet.

“I am overjoyed that so many of you have chosen to continue the dialogue and research of modeling and simulation with your contributions here today and feel better knowing that you are all my future colleagues,” Ören said.

Joshua Behr, associate professor research associate professor at VMASC and an associate professor of political science and geography, was track chair for the general sciences division at the Student Capstone Conference. He said the event could be viewed as an indicator of the health and viability of the modeling and simulation community, both in Hampton Roads and at ODU.

“This Capstone Conference, now heading into its fifth year, has witnessed robust growth in the number, quality and breadth of research presentations,” Behr said. “Modeling and simulation is a university-led effort that reaches into all colleges. Often we hear the phrase ‘multidisciplinary’ being bandied about causally, but in reality the idea of an M&S approach that embraces multidisciplinary collaboration is being realized.”

The students presented their research in the field of M&S to an audience of fellow students, faculty, judges and other distinguished guests. In addition to ODU students, students from the U.S. Military Academy, and the University of Genoa also attended the conference.

The winners in the five tracks at the Student Capstone Conference are as follows:

**Transportation:** Byas Ustun, ODU - Origin Destination Estimation for Trucks Based on Re-Identification Methods

**Medical:** Jacqueline Jackson, ODU - The Use of Gets and Orbit Cluster Analysis for Analyzing Rainfall Data in Relation to Rift Valley Fever Outbreaks

**General Science:** Nick Drucker and Kenyth Campbell, ODU - An Agent Based Modeling Approach to Examining the Relationships Between Education, Social Networks and Democratic Support

**Military/ Homeland Security:** Elaine Blount, ODU - Physical Fitness for Tactical Success

**Engineering:** Francesca Madoz and Federico Tanore, University of Genoa - Simulation for Environmental Impact Analysis and Sustainability

For conference proceedings, please visit www.vmasc.odu.edu

ODU Class stands in for NATO during simulation

By Leila Roche | jroche@news-ws.com • Originally published on Thursday, March 18, 2010

A school day for most students means being behind a desk, taking notes.

But students in Old Dominion University’s International Studies program spent Thursday, March 18th, dealing with crisis situations, such as an oil supply crisis in the Middle East and a terrorist attack in the Mediterranean.

During a day of hands-on application for a Crisis Decision Making course, graduate and select undergraduate students spent some time at the Virginia Modeling Analysis and Simulation Center acting out three different crisis scenarios aimed to train them in real-life crisis situations.

“You all are on the threshold of how these decisions will be made,” said Dick Bedford of Allied Command Transformation. “This is the business of getting information and achieving effective decision making.”

“Before you listened to keynote speakers; now it’s all about you,” said retired Navy Capt. Dick Whalen, ODU’s director of military affairs. Each student was assigned a different role — 28 represented countries, one was NATO’s secretary-general, one was chairman of the military committee and others were media — and responded to the manufactured crises as their real-world counterparts would have responded.

The event was built on a longstanding partnership between ODU and the NATO’s Allied Command Transformation, which generates the crises, and help to direct the study. Participants benefited from the use of VMASC’s modeling and simulation tools, with the help of VMASC’s modeling and simulation technologies. Modeling and simulation is an emerging technology, traditionally used by government and military agencies to create and test complex hypothetical situations and potential solutions.

In this case, it showed live maps and generated breaking news alerts, which helped the students learn how to respond to a world-crisis in real time. “We are focusing the information they’re researching to help them visualize the situation and then work through the decision process,” said John Sokolowski, VMASC executive director. The program “gives the students an opportunity to practice leadership skills and work as a team,” said Dr. Ruchal, professor of the graduate international studies program. “They learn they must be flexible and adaptable. They must choose to agree or be paralyzed.”

Old Dominion is one of the few schools able to benefit from modeling and simulation technologies, and Karp said she hopes to build partnerships with other schools. “You are among good company,” Bedford told the students. “Very few universities have this. Among them are Harvard and the Naval Academy.”

“This is a very unique opportunity for us,” Karp said. “That’s why we hope to partner with other schools in the future.”

M&S Business Plan Workshop coming in June

If you are a high tech graduate student, post-doctorate, military retiree or industry professional interested in starting your own fast growing modeling and simulation company, then don’t miss the upcoming workshop, "How to Start a Modeling and Simulation Company: This workshop, conducted at VMASC on June 15, 2010 will be lead by Simis, Inc., one of Hampton Roads’ fastest growing M&S startups, and will touch on business structures, M&S business specific, as well as business plan essentials. Look for more details about this and other business technology workshops planned for May and June 2010 at www.vmasc.odu.edu

In conjunction with the M&S Business Plan workshop, the VMASC Technology and Business Accelerator (VTBA) program will offer office space and industry membership for one year at no charge to one outstanding startup M&S company. The eligible companies must be (at a minimum) focused in one or more area of modeling, simulation or visualization, a for-profit company, owned by one or more U.S. citizens, have a solid M&S business plan and background with verifiable claims (academic industry) on research and technology transfer. For more information, contact Thomas Reese at treese@odu.edu

State Officials’ VMASC visits signal continued interest in M&S

Virginia’s Attorney General and Secretary of Transportation tour ODU’s VMASC

In April, Old Dominion University’s VMASC hosted two of our state’s top government officials, Virginia Attorney General Kenneth Cuccinelli and Secretary of Transportation Sean T. Connaughton.

Attorney General Cuccinelli arrived at VMASC on April 14 to meet with faculty and staff. After meeting with ODU’s President John Broderick and VMASC’s Executive Director John Sokolowski, he discussed the importance of modeling and simulation for state officials.

Connaughton followed on Thursday, April 15, meeting with Virginia’s Attorney General and touring ODU’s VMASC. Connaughton, appointed to his position on Governor Bob McDonnell’s recommendation, is focused on Mathematical Modeling and Simulation (M&S) research areas provided by ODU Professor Mark Scarseno and VMASC Senior Research Scientist Menelis Croll

On April 16th, ODU’s Research Director, Dr. Mohammad Karim hosted Secretary of Transportation Sean T. Connaughton at VMASC Dr. Karim, along with VMASC’s John Sokolowski and Mike Shelnutt, introduced the Virginia Attorney General to ODU’sVMASC and provided an overview of current transportation research projects, initiatives, and areas of expertise. Additional experts, including Dr. John Ducheneaux and Dr. Drew Landman, provided an introduction to the MAGLEV initiative, Billie Reed and Bob Allen discussed Commercial Space Transportation, Pat Hatcher’s Bio-algal Energy research, and Drew Landmann’s ODU’s SOLVE truck drug reduction energy research project.