



MODELING. SIMULATION. VISUALIZATION

STUDENT CAPSTONE CONFERENCE 2013

April 11, 2013
VMASC, Suffolk, VA

*****EXTENDED DEADLINES FOR PAPERS OR EXTENDED ABSTRACTS**

MARCH 22 - Submission Deadline

MARCH 29 - Acceptance Decision & Feedback

APRIL 3 - Upload Revised Submission



+ Career Expo + Submit your resume with your paper + Meet with potential employers + Resume Packet provided for industry attendees

AWARDS!



For more information and how to submit papers please check the "Call for Papers" at the conference website



www.vmasc.odu.edu/capstone2013



TRACK DESCRIPTIONS

+ M&S in General Science and Engineering - includes Environment, Energy, Political and International Studies

This track encompasses the use of modeling and simulation in the non-medical sciences and is open to all science disciplines and also focuses on M&S methodologies and applications in the broader domain of engineering. Modeling and simulation has replaced traditional experimentation, trial and error both in engineering and applied science fields. Examples include, but are not limited to ecology, political science, climate modeling, environment, international studies, sustainable energy, oceanography, biochemistry and behavior. Any application of modeling and simulation in the life sciences is a candidate for this track.

+ Homeland Security/Military

This track encompasses modeling and simulation that has been applied in either the military or homeland security domain. It will also include any work done in these domains that interfaces M&S capabilities with command and control systems and M&S work to support operations research, analysis, and visualization of military or homeland security systems or problems.

+ Medical and Health Care

This track looks into various aspects of medical and healthcare modeling and simulation from imaging capability to the augmented standardized patient (using augmented virtual reality). Modeling of the anatomy, for dynamic analysis of joints and muscles as well as for navigation in surgical applications, the virtual operating room, and virtual reality for rehabilitation are also key to this application area. The development of simulators and the validation of those simulators will also be covered in this track.

+ Gaming and Virtual Reality

Gaming includes not only all aspects related to the development of games and gaming environments, but also research topics related to the serious use of games, as well as the effects of gaming. Development aspects can be as varied as those on game environments, artificial intelligence for game agents, or methods to enable distributed gaming. Aspects related to gaming use and effects also vary widely, ranging from serious gaming to the impact of online gaming environment interactions.

Immersion and Virtual Reality encompasses the many different topics related to immersive environments and virtual reality issues. The track is looking for any topics related to either the development of such environments; the presentation requirements (visual and other) to make such environments accessible; and the effects of employing such environments to present information.

+ Training & Education

The Training & Education Track consists of presentations that combine ideas and concepts from the discipline of Modeling and Simulation (M&S) and the application domains of Training and Education. Topics may include: applications of M&S in training or education, M&S education or training, effectiveness of simulation-based education and training, simulator development and applications, and the use of M&S to enhance STEM education.

+ Transportation

This track includes applications of modeling and simulation to solving multimodal transportation problems. The development, validation, and application of microscopic and macroscopic traffic simulation, travel demand models, and hardware in the loop simulation are some of the research topics for surface (road) transportation. M&S application in the development of a reliable and sustainable public transportation system integrated within the urban development is another area. Simulations of port facilities, railroads, and the air transportation system are also included in this track.

+ Business and Industry

This track focuses on M&S methodologies and applications in areas related to business and industry. A few to name are manufacturing, retail, banking, restaurants etc. Examples of research are, but are not limited to, enterprise decision support, operations research, optimization, forecasting, supply chain, queuing analysis, product design, testing, life cycle support, and more.