Welcome

Old Dominion University and the Virginia Modeling, Analysis and Simulation Center welcome you to the sixth annual *Modeling, Simulation & Visualization (MS&V) Student Capstone Conference.*

The Conference features student research and student projects that are central to MS&V. Also participating in the conference are faculty and judges who have volunteered their time to impart direct support to their students’ research, facilitate the various conference tracks, serve as judges for each of the tracks, and provide overall assistance to this conference.

This handbook is designed to assist all participants of the conference to better understand their areas of responsibilities. Included are descriptions of the student paper requirements, Track Leaders’ duties, and criteria for judging papers and presentations.

Appreciating the purpose of the conference and working in a cohesive, collaborative effort will no doubt result in a successful symposium for all involved. Thank you for joining us!

Sincerely,

Rick McKenzie,
Capstone Conference Chair Person
rdmckenz@odu.edu

John Shull,
Capstone Conference Vice Chair
JShull003@odu.edu

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Registration Fee and Payment Method

Registration is at the door. The regular registration fee is $50. The student registration fee is $25.

The registration fee will be paid by cash only on site at VMASC. Credit card, debit card, checks will not be accepted.

Please note that this fee covers the breakfast, lunch, dinner and snacks and drinks given during the whole day.
## Schedule April 11, 2013

### Morning
- **8:00 – 8:30**  
  Registration, Reception, Breakfast
- **8:30 – 8:50**  
  Opening Remarks
- **9:00 -10:00**  
  Track presentations
- **10:00 - 10:20**  
  Morning break
- **10:20 - 11:40**  
  Track presentations

### Afternoon
- **11:40 - 1:30**  
  Lunch and Career Fair
- **1:30 - 2:50**  
  Track presentations
- **2:50 - 3:10**  
  Afternoon break
- **3:10 - 4:30**  
  Track presentations

### Evening
- **4:15 - 5:30**  
  Reception (4:30 – 5:00 VMASC tour)
- **5:00 - 6:00**  
  Speaker & Award presentations

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Each presentation will be 20 minutes long (including Q & A).
Track Descriptions

Can be found on the website.

Conference Committee

Track Leaders
Track Leaders are key to the smooth running of the conference. Leaders have a number of responsibilities; therefore, they are encouraged to enlist the assistance of other faculty and/or experts in the track concentration.

Track Leaders are asked to do the following:

- Solicit the assistance of faculty to serve as Reviewers and Judges
- Receive and review papers for suitability of presentation for your designated track and then forward to Reviewers
- Administer your track: watch time, sequence, and orderliness of the presentations
- Assist judges as needed to facilitate their decision on best paper and best presentation in their track

Reviewers
Track Leaders will solicit the assistance of Reviewers to critically evaluate the student papers.

The Best Paper Evaluation Form may be used to evaluate papers (see Appendix A). Each reviewer is asked to consider the following in critiquing a submittal:

1) Organization and Suitability
   - Is the material organized and focused
   - Is the presentation and/or argument understandable
   - Is this original research, a review of previous research, or informative
   - Does the paper cover the topic comprehensively, partially, or as an overview
   - Is the citation style clear and consistent

2) Illustrations
   - Review use of charts, graphs, maps for relevance and aesthetic
3) Timeliness and Usefulness

- Is the information current
- Does the research support or refute an argument
- Is the Bibliography selective with primary sources

Judges

Judges will be invited to participate in the conference. Typically, there are two or three judges per track. Judges come from various sectors of the M&S community such as academia, industry, and government. The Judges must be able to commit the full day to hearing and observing the student presentations. Once the presentations are finished they decide on best paper and best presentation in their track. A Best Paper Evaluation Form and a Best Presentation Evaluation Form will be completed by each Judge (see Appendices A & B). These students will be recognized at the evening banquet; and will receive their awards to commemorate the event.
The Gene Newman Award for Excellence in M&S Research

The Gene Newman Award for Excellence in M&S Research was established in recognition of Mr. Eugene G. Newman for his tireless effort in advancing modeling and simulation education, research, and development.

Mr. Newman played a significant role in the creation of VMASC (in 1997) by realizing the need for credentialed experts in the M&S workforce in the military and in industry. His foresight has affected both the economic development and the high level of expertise in the M&S community of Hampton Roads.

Students receiving this award have proven themselves to be outstanding researchers and practitioners of modeling and simulation.

Capstone Banquet

The day’s events will close with an evening awards banquet. Activities involve a reception and a presentation by a distinguished guest speaker. The highlight of the evening will be the Recognition and Presentation Awards.
About MSVE…

The Department of Modeling, Simulation and Visualization Engineering (MSVE) at Old Dominion University offers an undergraduate four-year degree program leading to the Bachelor of Science in Modeling and Simulation Engineering (BS-M&SE). The department also offers programs of graduate study leading to the degrees Master of Engineering, Master of Science, Doctor of Engineering, and Doctor of Philosophy with a major in Modeling and Simulation. The department's academic programs are coupled with a strong department research program conducted jointly with researchers from the Virginia Modeling, Analysis and Simulation Center (VMASC). Research activities range from investigation of fundamental modeling and simulation methods and technologies to applications of modeling and simulation in the domains of medicine and health care, transportation, education and gaming, science and engineering, homeland security and defense, and business enterprise decision support.

The MSVE Department is located on the first floor of the E. V. Williams Engineering and Computational Sciences Building on the Old Dominion University Norfolk Campus. In addition to the department and faculty offices, this facility also houses several instructional and research laboratories, a virtual reality theater, and a four-walled C.A.V.E. (Cave Automatic Virtual Environment). A significant resource to the department is the Virginia Modeling, Analysis and Simulation Center located adjacent to the University's Tri-Cities Higher Education Center in Suffolk, Virginia. VMASC occupies a two-story 60,000 square foot building designed to support state-of-the-art research in modeling, simulation and visualization. Some of the center's facilities are used in the department's educational programs; in addition, VMASC researchers teach courses and mentor students in the department's academic programs.

Old Dominion University was the first to offer the Ph.D. in modeling and simulation in 2000. We now are the first to establish an academic department and to offer an undergraduate engineering program in modeling and simulation. We welcome you to our website and look forward to working with you in the exciting discipline of modeling and simulation.

http://eng.odu.edu/msve/
About VMASC . . .

The Virginia Modeling, Analysis and Simulation Center (VMASC) is a university-wide multidisciplinary research center that emphasizes modeling, simulation, and visualization (MS&V) research, development and education.

VMASC is one of the world's leading research centers for computer modeling, simulation, and visualization. The mission of the Center is to conduct collaborative MS&V research and development, provide expertise to government agencies and industry, and to promote Old Dominion University, Hampton Roads and Virginia as a center of MS&V activities. Working with more than one hundred industry, government, and academic members, VMASC furthers the development and applications of modeling, simulation and visualization as enterprise decision-making tools to promote economic, business, and academic development. Annually, the Center conducts approximately $10M in funded research.

VMASC concentrates on eight core modeling and simulation applied research areas:

- Transportation
- Homeland Security and Military Defense
- Virtual Environments
- Social Sciences
- Medicine & Health Care
- Game-based Learning
- M&S Interoperability
- System Sciences

www.vmasc.odu.edu
Appendix A

2012 Student MS&V Capstone Conference
Best Paper Evaluation Form - Judges

Information about the article:

Student: ____________________________________________________________

Title of paper: _________________________________________________________

Track: _______________________________________________________________

<table>
<thead>
<tr>
<th>5</th>
<th>4</th>
<th>3</th>
<th>2</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Excellent</td>
<td>Developing Excellence</td>
<td>Satisfactory</td>
<td>Needs Improvement</td>
<td>Unsatisfactory</td>
</tr>
</tbody>
</table>

Please consider the following in the critique of the paper:

1) Organization and Suitability

• Is the material organized, focused, and understandable

________________________________________________________________
________________________________________________________________

5 4 3 2 1

• Does the paper contribute to the Body of Knowledge

________________________________________________________________
________________________________________________________________

5 4 3 2 1

• Is this original research, a review of previous research, or informative

________________________________________________________________
________________________________________________________________

5 4 3 2 1
• Does the paper cover the topic comprehensively, partially, or as an overview

_____________________________________________________________________________________

5 4 3 2 1

• Quality of Writing: well written with the citation style clear and consistent

_____________________________________________________________________________________

5 4 3 2 1

2) Illustrations
• Review use of charts, graphs, maps for relevance and aesthetic

_____________________________________________________________________________________

5 4 3 2 1

3) Timeliness and Usefulness
• Is the information current; does it have a breadth of interest

_____________________________________________________________________________________

5 4 3 2 1

• Does the research support or refute an argument

_____________________________________________________________________________________

• Is the Bibliography selective with primary sources

_____________________________________________________________________________________

5 4 3 2 1

4) Evaluation - Accept ___ Accept w/ modifications ___ Lean to Reject ___ Reject ___
Appendix B

2012 Student MS&V Capstone Conference
Best Presentation Evaluation Form - Judges

Student __________________________ Date ___________________

Track _______________________________________________________

Paper Title __________________________________________________

<table>
<thead>
<tr>
<th>5 Excellent</th>
<th>4 Developing Excellence</th>
<th>3 Satisfactory</th>
<th>2 Needs Improvement</th>
<th>1 Unsatisfactory</th>
</tr>
</thead>
<tbody>
<tr>
<td>The student requires no prompting for clarification. Discussion points are discussed in depth and detail. The highest level of performance is achieved.</td>
<td>The student is able to clarify information with only a prompt so that information is accurate and covered in sufficient detail.</td>
<td>The student requires clarification on one or two minor discussion points so that information is accurate and covered in sufficient detail.</td>
<td>The instructor must provide directed questioning so that the information is accurate and covered in sufficient detail.</td>
<td>The student needs extensive clarification. The instructor has to intervene so that the information is accurate and covered in sufficient detail.</td>
</tr>
</tbody>
</table>

A. Innovation of Idea (40%)
The following is discussed.

☐ Purpose of research
☐ Methodology
☐ VVA

B. Review of Literature (20%)

☐ Current and related research identified and discussed
☐ Primary literature is correctly summarized
☐ Major strengths or deficiencies of these data are discussed

C. Evaluation of Research (20%)

☐ Strengths and weaknesses of methodology identified
☐ Statistical analysis is assessed and critiqued
☐ Conclusions are drawn and compared with current research
☐ Student’s own conclusions about the research are correct

D. Ability to answer questions (10%)

☐ Answers are logically presented
☐ Answers are accurate
☐ The student can think on their feet and may theorize if unsure (but indicates such)

E. Organization and Presentation (10%)

☐ Well prepared (does not reread the article)
☐ Introduction of research effectively sets the stage for the remainder of the presentation
☐ Direct eye contact is made with the audience
☐ Professional terminology used
☐ Confidence is apparent; absence of nervousness
☐ Printed material or visual aids are well prepared and utilized effectively
☐ Presentation is summarized at the conclusion

- 13 -
Total Score * _________________ (will be between 5 and 25)

This score will determine the placement of the presentation. Highest scores will rank presenters in first, second, or third place. First place presentations will receive the Gene Newman Award for Excellence in M&S Research.

Comments:
______________________________________________________________________
______________________________________________________________________
______________________________________________________________________
______________________________________________________________________
______________________________________________________________________
______________________________________________________________________