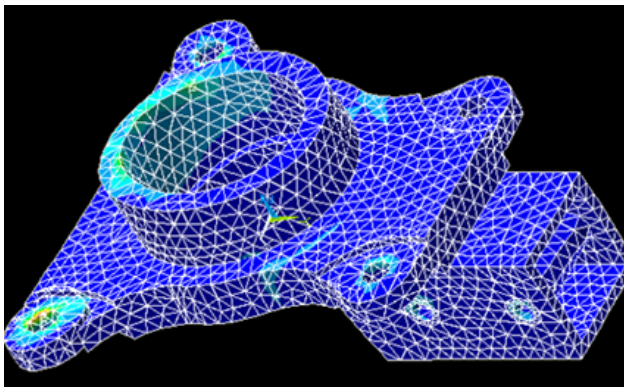


***Proposed Graduate Degree Programs
in Modeling and Simulation
at UAHuntsville***

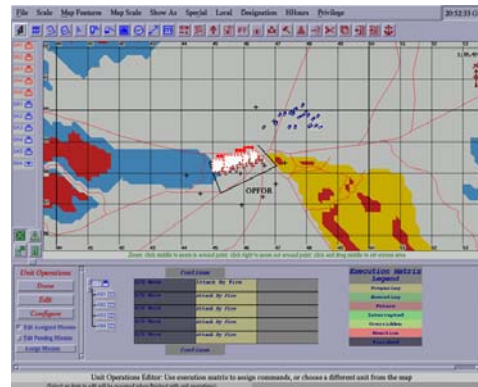
UAHuntsville
THE UNIVERSITY OF ALABAMA IN HUNTSVILLE

M&S definitions

- Modeling and simulation, as terms
 - Model; a representation of something else
 - Simulation; execution of a model over time
- Modeling and simulation, as a discipline
 - Modeling methods
 - Applications & use
 - Theory
 - Verification & validation
 - Human-system interaction
 - Architectures & implementation



Engineering design



Combat analysis



Flight training

Existing M&S degree programs

- University of Central Florida (Orlando FL)
 - Program started 2002
 - Interdisciplinary (multiple colleges, departments)
 - Current enrollment 120
 - Graduates per year: 30 M.S., 8 Ph.D.
- Old Dominion University (Norfolk VA)
 - Program started 1998
 - Interdisciplinary (multiple colleges, departments)
 - Current enrollment 131
 - Graduates per year: 20 M.S., 4 Ph.D.

Some M&S
Ph.D. Graduates



Sokolowski
ODU, 2003



Weisel
ODU, 2004



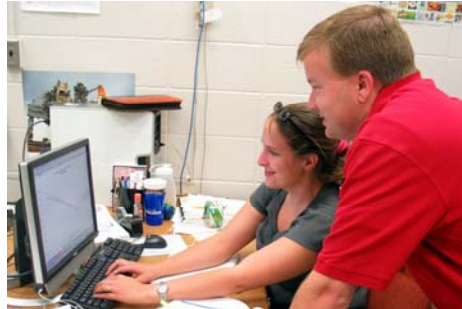
Goldiez
UCF, 2004

Proposed UAHuntsville M&S degree program

- M.S. and Ph.D. in Modeling & Simulation
- Requirements
 - M.S. 24 course hours + thesis, or 30 course hours
 - Ph.D. 54 course hours (24 beyond M.S.) + dissertation
- Program courses
 - Interdisciplinary, courses from multiple departments
 - Required core courses plus selectable electives
 - **Most courses already in UAHuntsville catalog**
- New courses to be added
 - Introduction to Modeling and Simulation
 - Simulation Project Management
 - Continuous System Simulation

Educational objectives

- M&S M.S. will prepare graduates to be ...
 - M&S practitioners in industry and government
 - Research staff in industry and government
 - Research staff in academic research labs
 - M&S Ph.D. student
- M&S Ph.D. will prepare graduates to be ...
 - Research leaders in industry and government
 - Research leaders in academic research labs
 - Academic faculty in M&S



Departments and faculty involved

- Key departments
 - Computer Science
 - ISEEM
- Supporting departments
 - Mathematics
 - Physics
 - Psychology
- Selected faculty (alphabetical)
 - W. Colley, Physics/CMSA
 - P. Componation, ISEEM
 - G. Cox, CS
 - J. Li, Math
 - A. Morris, Psych/CMSA
 - M. Petty, CS/ISEEM/CMSA
 - J. Swain, ISEEM
 - G. Zank, Physics/CSPAR

Community interest in M&S degree program

- Explicit interest from **government** personnel
 - U.S. Army SED, U.S. Army SSDD
 - NASA MSFC
- Explicit interest from **industry** personnel
 - SAIC, Boeing, AEgis, Dynetics
 - Alabama Modeling & Simulation Council
- Grants to support M&S program development
 - SAIC
 - Boeing
- Projected enrollments
 - M.S., 45 enrolled, 20 graduates per year
 - Ph.D., 25 enrolled, 5 graduates per year

Related UAHuntsville programs

- ISEEM
 - M.S.E. with concentration in Modeling & Simulation
 - Complementary to M&S degree program
 - Serve different student markets
- Continuing Education
 - Certificate program in modeling and simulation
 - Synergistic with M&S degree program
 - Cont Ed students may continue into degree program

Possible collaborations

- Collaboration modes
 - Distance learning offerings
 - Exchange of courses
 - Visiting faculty
- Possible statewide collaborators
 - University of Alabama at Birmingham
 - University of Alabama
 - Auburn University
- Other national collaborators
 - University of Central Florida
 - Old Dominion University
 - Naval Postgraduate School

Questions?

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