

ISTEC 2008 Workshop: Objectives and Format

Rajesh Bhaskaran

Sibley School of Mechanical & Aerospace
Engineering

Cornell University
Ithaca, New York



Swanson Engineering Simulation Program

- Established in 2000 by the Sibley School of Mechanical & Aerospace Engineering
- Endowed with a gift from Dr. John Swanson, founder of ANSYS, Inc. and Sibley School alumnus
- Mission: To integrate state-of-the-art simulation technology into the curriculum
- Supports Director of the Swanson Program
- Unique features:
 - Provides sustained support for simulation in education
 - Broad curriculum view

Advisory Committee

Chair: Dr. John Swanson

Engineering Companies

Boeing

GE

GM

Rolls-Royce

Software Companies

ANSYS Inc.

The Mathworks

PTC

University of Michigan

Impetus for ISTEK workshop comes from Advisory Committee.

Workshop Objectives

- Share curriculum materials, best practices and innovative strategies for integrating simulation technology into the curriculum
- Build a community of educators & practitioners, and stimulate future collaborations
 - Probably the first time that universities, engineering companies, software vendors, NSF and ASME are gathered for a sustained discussion on simulation in education
- Develop conclusions and recommendations that can be disseminated to the larger community

Workshop Themes

- Integration of simulation with theory, experiment and design
- Simulation tools as a platform for the integration of teaching and research
- Using multi-physics software to convey to budding engineers the unity underlying disparate subject areas
- Enhancement of the learning experience through hands-on, visual learning

Workshop Program Overview (1/2)

- Session on simulation technology in engineering practice
- Two sessions on simulation in education
 - Current status and future potential
- Panel on implementation issues
 - Commercial software access at educational institutions
- Hands-on computer session to try out
 - A wiki-based system for content creation
 - Online modules developed by the Swanson Program

Workshop Program Overview (2/2)

- Closing session
 - Engineering education opportunities at NSF
 - Breakout session on “overcoming barriers and institutionalizing best practices”
 - Final panel: Breakout session leaders reporting back to full group and plenary discussion
- Area with displays and brochures from software vendors will be open throughout the event

Acknowledgements

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- Swanson Program Advisory Committee
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- Mr. Gabriel Terrizzi
- ISTE 2008 participants