The National Center for Collaboration in Medical Modeling & Simulation

12 October 2012
Mission Statement

NCCMMS is a research program dedicated to improving patient care and affordability by advancing the quality and quantity of medical modeling and simulation-based training and education available to healthcare students and practitioners through active collaboration with industry, academic, and government partners.
Overview of NCCMMS

- NCCMMS was established in 2001 as a joint venture between Eastern Virginia Medical School (EVMS) and Old Dominion University’s Virginia Modeling, Analysis and Simulation Center (VMASC).
  - NCCMMS was initially supported by an appropriation in the FY 2003 Defense Appropriations Act, and has operated with a mix of public and private funding since that time.
  - In ten years of operation, it has brought together academia, industry, and the public sector for the conduct of research and has deployed simulation-based training systems designed to improve practitioner competence and patient safety.

- Example historic and ongoing development efforts
  - Augmented Standardized Patient/Virtual Pathology Stethoscope
  - Wound Debridement Simulator
  - Health Record Data Mining
  - Virtual Immersive Portable Environment Applications
  - Re-purposing of DoD M&S technologies in the healthcare domain
Laboratory for the Investigation, Validation, & Verification of Emerging Simulators

- The Laboratory for Investigation, Validation and Verification of Emerging Simulators, or LIVES, is a test and evaluation laboratory for medical modeling and simulation devices, such as surgical simulators, mannequins, and computer-based environments.

- LIVES assesses new medical simulators from the perspectives of a number of disciplines, including:
  - Human factors psychology
  - Clinical medicine
  - Medical education
  - Bioengineering
  - Computer science
  - Modeling and simulation
  - Visualization

- LIVES provides a one-stop shop for assessment and critique throughout every stage of the simulator evaluation process.
The Medical Simulation Development Laboratory (MSDL) seeks to build on the NCCMMS mission by providing a targeted focus on basic and applied research in the medical simulation and related domains.

An effort of this type will contribute to the economic development of the Commonwealth by:
- Creating employment opportunities for healthcare and engineering professionals
- Attracting corporate R&D funding
- Exposing the advantages of the Commonwealth
- Attracting high-tech industries
The Medical Modeling and Simulation Database (MMSD) is a searchable collection of research citations and organizational presence in the medical modeling and simulation domain. It is intended to encourage continued research and collaboration within the medical simulation community.

The MMSD includes the following:

- Companies and products in the MMS industry, e.g. developers, device manufacturers, training organizations, and consultants.
- Medically focused centers for simulation worldwide.
- Websites targeting activities of interest to the MMS community.
- MMS domain conferences worldwide and up-to-date meeting information.

The MMSD is housed by www.MedicalModSim.com, which serves as the premier gateway to a broad array of resources and services in the medical modeling and simulation domain.
The Healthcare Simulation Research Collaborative

- The HSRC is a coordinated outreach effort aimed to formally link national medical modeling and simulation research facilities, including university research centers and groups, in order to create a distributed research capability par none.

- The goal of the HSRC is to create purposeful synergy, resulting in the advancement of the domain and improvement in patient treatment and care.

- Current membership includes
  - EVMS
  - ODU
  - NSU
  - VCU
  - GMU
NCCMMS Contacts

C. Donald Combs, PhD
NCCMMS Co-Director
Vice President and Dean, School of Health Professions
Eastern Virginia Medical School
P.O. Box 1980
Norfolk, VA 23501-1980
Phone: (757) 446-6090
combscd@evms.edu

Bob Armstrong
Program Manager
NCCMMS
P.O. Box 1980
Norfolk, VA 23501-1980
Phone: (757) 446-7121
armstrrrk@evms.edu

John Sokolowski, PhD
NCCMMS Co-Director
Executive Director, Virginia Modeling, Analysis and Simulation Center
Old Dominion University
1030 University Blvd
Suffolk, VA 23435
Phone: (757) 686-6200
jsokolow@odu.edu

Taryn Cuper
Senior Research Associate
NCCMMS
P.O. Box 1980
Norfolk, VA 23501-1980
Phone: (757) 446-7116
cupertt@evms.edu

www.evms.edu/nccmms
Learn more!

- Visit and collaborate with us at
  - www.evms.edu/nccmms
  - www.MedicalModSim.com
  - NCCMMS.blogspot.com
  - Google+ handle NCCMMS