

## **Gaming Technology and Cyber-infrastructure Enabled Learning**

### **American Council of Learned Societies**

#### **Digital Innovation Fellowships**

*Deadline—November 10, 2006*

These fellowships, created with the generous help of The Andrew W. Mellon Foundation, support an academic year dedicated to work on a major scholarly project of a digital character that advances humanistic studies and best exemplifies the integration of such research with use of computing, networking, and other information technology-based tools. The fellowships provide a stipend of \$55,000 for an academic year's leave from teaching, plus an allowance of \$25,000 for purposes such as access to tools and personnel for digital production, collaborative work with other scholars and with humanities or computing research centers, and the dissemination and preservation of projects.

The Science and Engineering Information Integration and Informatics (SEIII) program focuses on advancing the state of the art in the application of advanced information technology to science and engineering problems in specific domains, such as astronomy, biology, the geosciences, public health and health care delivery. Since many scientific problems have common needs for information management and data analysis, the advancement of these technologies is central to SEIII. Similarly, within computer science, the study of complex distributed computer and network systems requires the collection and analysis of timely, accurate and reliable information. Although methods for the analysis of scientific data and information will be supported by the program, a special emphasis will be placed on domain-specific and general-purpose tools for integrating information from disparate sources. Such integration is a key step of many projects yet is rarely addressed in full generality. The SEIII program will have two separate components to address these research areas: Science and Engineering Informatics (SEI) and Information Integration (II).

Within this program, the NSF intends to support a group of projects that will advance the understanding of technology to enable scientific discovery, and that will creatively integrate research and education for the benefit of technical specialists and the general population.

### **United States Department of Defense-Naval Air Warfare Center (NAWC)**

#### **NAWCTSD Broad Agency Announcement—Training Technology and Methodology Research**

#### **Virtual Environment Training Technology**

*Continuous Deadline*

The Naval Air Warfare Center Training Systems Division (NAWCTSD) contracts with educational institutions, nonprofit organizations, and private industry for research and development (R&D) in the areas of Training Technology and Methodology, Simulation Systems, and Computer Applications. This broad agency announcement (BAA) is intended to cover, in general, all R&D areas of interest to NAWCTSD and its customers relating to simulation and

training technology. NAWCTSD has comprehensive simulation training system responsibilities ranging from research and technology-based development through system acquisition and life cycle support. The requirement for R&D conducted under this BAA is to explore unique training technologies incorporating innovative behavioral and engineering technologies that are needed for more effective and less expensive training systems.

The Virtual Environment Training Technology (VETT) program of research and development is grouped into four distinct areas:

1. Human-Computer Interaction (HCI)
2. Entity Interaction (EI)
3. Performance Measurement
4. Training Interventions

**United States Department of Defense-Naval Air Warfare Center (NAWC)  
NAWCTSD Broad Agency Announcement—Modeling and Simulation Research  
*Continuous Deadline***

Modeling and Simulation (M&S) includes real time and faster than real time solutions. The Government seeks novel analysis methodologies that are applicable to system of systems evaluation; performance prediction of the behavior of complex, interdependent systems; cost and performance trade space analysis for various combinations of diverse systems; the forecasting of technology and evaluation of emerging research; the impact of information operations; and other twenty-first century concepts. While key focus areas have been detailed, the Government is interested in new concepts that may lead to paradigm shifts in modeling and simulation.

**Research Areas**

- 2.2.1 Human Performance Representation
- 2.2.2 Knowledge Integration
- 2.2.3 C4I to Simulation
- 2.2.4 Verification, Validation, & Accreditation
- 2.2.5 Natural Environment Representation
- 2.2.6 Composable Mission Space Environments
- 2.2.7 Collaborative Environments for Engineering and Simulation Education

**United States Department of Defense-Army Research Laboratory (ARL)  
Broad Agency Announcement (DAAD19-03-R-0017)—Computing and Information Science  
Mobile, Wireless Communications, and Networks  
*Continuous Deadline (September 30, 2006)***

The mobile, wireless communications and networks research program is concerned primarily with establishing the fundamental understanding necessary to support the Army's future mobile, wireless tactical battlefield communications needs. The research in this program primarily targets the tactical battlefield at brigade and below. The Army is interested in communication systems operating in frequency bands traditionally occupied by narrowband radios high frequency (HF),

very high frequency (VHF), and ultrahigh frequency (UHF) as well as systems operating in frequencies extending into the millimeter wave region. These systems must support broad-based and highly mobile communications and must perform in environments of impressive diversity, from dense foliage to dense urban obstructions, and unintentional and intentional jamming. Future Army tactical communication systems for the digital battlefield will consist of many different types of networks and must be capable of communicating on the move. These systems will be highly mobile creating highly dynamic network topologies (mobile ad-hoc networks) and routing multimedia (voice, data and video) data. Unlike commercial systems, the communications infrastructure must be mobile. In addition to the highly mobile communications, there is interest in algorithms for small, very energy-limited, stationary, unattended ground sensors.

**United States Department of Defense-Army Program Executive Office for Simulation,  
Training, and Instrumentation  
Battlefield Simulation Research**  
*Continuous Deadline (September 30, 2006)*

**1. BATTLEFIELD SIMULATION RESEARCH:**

Engagement Simulation and Instrumentation Technology  
Distributed Simulation Environments and interoperability  
Logistics and Combat Service Support M&S Technologies  
Synthetic Environment Data Modeling, Interchange, Access, and Reuse Development Effort  
Synthetic Natural Environment  
Position, Location, and Tracking for Live Training in Urban Terrain  
Modeling and Simulation for Asymmetrical Warfare  
Individual Virtual Environment Technologies (IVET)  
Objective Force Experimentation  
Special Projects, Modeling of Behavior(s) for Intelligent Unmanned Ground Systems  
Computer Generated Forces  
Medical Modeling and Simulation  
Web-based Collaborative Training Environments  
Embedded Simulation and Training  
Virtual Individual and Collective Training for Dismounted Objective Force Warriors  
Wireless Communications and Networking.