



#S4 ■ Student Reception

Tuesday, October 2, 5:00 to 6:00 p.m.

Free to student registrants

All student attendees are invited to gather at the hotel at this cash bar event. Snacks will be provided.

#S5 ■ Augmented Cognition International Society Banquet

Tuesday, October 2, 6:00 to 9:00 p.m., \$65

All 51st Annual Meeting attendees are welcome to attend the ACI annual banquet, but seating is limited, so sign up early. (See page 2 for more information about ACI events.)

#S6 ■ Elegance on the Water

Thursday, October 4, 6:30 to 9:30 p.m., \$82

Enjoy a relaxing yacht cruise past the beautiful skyline of Baltimore's Inner Harbor to Ft. McHenry, where Francis Scott Key penned the "Star Spangled Banner." Baltimore is one of the world's oldest seaports and a popular destination. Included in this evening's event will be a three-course dinner and musical entertainment.

Technical Tours

Sign up for Professional Tours on the Registration Form using the code found at the beginning of each event (e.g., #T1). Tours are reserved on a first-come, first-served basis on receipt of fully paid registration. Tours not meeting a minimum attendance by August 27, 2007, are subject to cancellation. Waiting lists will be established and registrants notified if additional tour times are made available.

#T1 ■ U.S. Army Research Laboratory (ARL), Human Research and Engineering Directorate, Aberdeen Proving Ground

Wednesday, October 3, 7:45 a.m. to 1:30 p.m., \$35 (includes lunch)

Maximum attendance: 40; not fully ADA-accessible (requires considerable walking and stairs; wear comfortable clothing and shoes); no cameras, cell phones, or laptops; requires valid driver's license and Social Security Number

ARL conducts the Army's fundamental and applied research leading to key technologies necessary to assure supremacy in future land warfare. Researchers at the Human Research and Engineering Directorate use unique facilities to execute an innovative program of soldier-oriented research and development and design principle analyses to protect and extend soldiers' visual, auditory, and cognitive performance in complex, time-critical battlefield stressor environments. During this tour, you may experience the Immersive Environment Simulator, which features a reconfigurable stereoscopic display system in a CAVE®-like environment, the first system of its type to include an omnidirectional treadmill. While in the Hostile Environment Simulator, you may experience bone-rattling impulse sounds of 155 dB. Inside the VirTra, you may experience a 360-degree interactive environment, which can shoot back at you. We may even monitor your brain waves during this event. You may witness soldier marksmanship at the only research-class small-arms firing range in the United States. You may visit our Mobility-Portability Course, a standard course for measuring effects of soldier load, equipment, and clothing on mobility and their effects on mental and physiological functions. **NOTE: Because of the citizenship requirement, registrations for this tour cannot be accepted after 9:00 a.m. Pacific time on September 10, 2007.**

#T2 ■ University of Maryland Baltimore County Interactive Systems Research Center (ISRC)

Wednesday, October 3, 8:30 a.m. to 1:30 p.m., \$50 (includes lunch)

Maximum attendance: 40; ADA accessible

Human-centered computing research within the ISRC addresses a diverse collection of interrelated research questions centered on the design, implementation, and evaluation of highly usable interactive systems. ISRC research takes place in the field and the lab and employs both qualitative and quantitative research methodologies. Ongoing projects address a variety of issues, including but not limited to accessibility (e.g., traditional disabilities, challenges associated with the context in which interactions occur, age variations including children and adults, and internationalization of user interfaces), computer-supported cooperative work, user modeling, interfaces to support information access, and adaptation/personalization. The tour will include an overview of ISRC research and a series of brief research summaries. The majority of the time will be spent touring the labs and engaging in a poster session designed to maximize interaction between attendees and ISRC researchers.



Baltimore Inner Harbor. This and all other photos courtesy of the Baltimore Area Convention and Visitors Association.

#T3 ■ User-Centered Informatics Research Laboratory at the National Cancer Institute

Wednesday, October 3, 9:00 a.m. to 1:00 p.m., \$35

Maximum attendance: 15. ADA accessible; photography and cell phones OK, but no audio or videotaping

The User-Centered Informatics Research Lab at the National Cancer Institute conducts user-centered design and market research activities to aid the Institute in the delivery of health information to cancer researchers, medical professionals, and the public. Lab staff bring insights from human factors, social marketing, risk communication, and related disciplines. The research facility offers a computer- and multimedia-based environment for research and testing of Web-based products, hand-held technologies, statistical information display, informational services, and workflow processes. The Lab facilities consist of formal control, test, and observation rooms; all components are fully networked to allow remote and cross-room observation and communication. During the tour, attendees will see demonstrations of the Lab's equipment and facilities. Tour leaders will present several case studies for ongoing user-centered research initiatives.



#T4 ■ Uniformed Services University of the Health Sciences (USUHS) National Capital Area Medical Simulation Center

Wednesday, October 3, 10:00 a.m to 1:00 p.m., \$20
Maximum attendance: 28; ADA accessible; requires official U.S. government-issued identification (valid driver's license or passport)

Learners at USUHS have access to some of the most advanced medical simulation technologies available in the world through the University's National Capital Area Medical Simulation Center. About 13,000 simulations are performed at this 20,000-square-foot center each academic year. It is open to all medical and nursing students, interns, residents, and others in the USU community. The center conducts both clinical and surgical skills-training scenarios using four simulation modalities. Standardized Patients (human simulators) are used in the Clinical Skills Laboratory's clinical examination rooms to train and assess the communication, interpersonal, professional, physical exam, and diagnostic reasoning skills of learners. Learners in the Computer Laboratory can also use interactive LAN and Web-based software applications to learn and evaluate a variety of medical skills. Learners in the Surgical Skills Laboratory can use medical simulation devices such as needle insertion devices and high-fidelity computerized manikins to practice selected trauma and surgical training scenarios. In the Virtual Reality Environments Laboratory, learners can use haptic feedback and immersive 3-D environments to practice on task trainers or undergo team training in fully immersed scenarios in deployment or peacetime training environments. Although no simulations are scheduled for the tour date, visitors will be familiarized with the types of simulation used to teach and evaluate certain clinical skills.

#T5 ■ Maryland Advance Simulation, Training, Research, and Innovation (MASTRI) Center; Maryland Institute for Emergency Medical Service Systems (MIEMSS) Emergency Medical Communications Center; R. Adams Cowley Shock Trauma Center

Wednesday, October 3, 12:45 to 3:45 p.m., \$20
Maximum attendance: 20; ADA accessible; no photography or audio or video recording; cell phones permitted

This tour covers three facilities: a simulation center, an EMS communications center, and a trauma center. The MASTRI Center is a state-of-the-art medical simulation facility for minimally invasive surgery; human-patient simulation for team training, trauma, and anesthesia; and a research lab for physical and cognitive ergonomics associated with surgery and medical imaging. The MASTRI Center tour will include a hands-on demo of medical simulators and a demonstration at a surgical posture analysis lab. MIEMSS is the regulatory body for emergency medical services in the state of Maryland. Its state-of-the-art communications center, known as SYSCOM, houses a radio communication system for EMS services. The Shock Trauma Center serves as the Primary Adult Resource Center for trauma care in the state of Maryland. Special emphasis at the Shock Trauma Center is on the telecontrol center, which is the central piece of an infrastructure that supports human factors research on team performance, decision making under stress, distant leadership, and patient safety.

#T6 ■ AnthroTronix, Inc.

Wednesday, October 3, 1:00 to 5:00 p.m., \$35
Maximum attendance: 15; ADA accessible; no photography or video or audio recording; cell phones permitted

AnthroTronix is a small business specializing in advanced human-technology interfaces for computers and robotics. The facility is a working engineering research and development laboratory featuring high-quality computer-aided design and prototyping capabilities as well as working prototypes of robots and robotic and computer interfaces. In May 2006, AnthroTronix, through its subsidiary ATKidSystems, successfully launched its first commercialized technology product. Cosmo's Learning Systems (CLS), a user-centered-design-based technology, was developed to rehabilitate and educate children with disabilities. Attendees will have the opportunity to interact with CosmoBot, the robot for children with disabilities, and Mission Control, the alternative computer interface from CLS. Attendees will also be able to drive the simulated robots using the mounted force controller and instrumented glove that was designed to drive commercial robots for military and search-and-rescue applications.



Fell's Point

#T7 ■ Consumer Product Safety Commission (CPSC) Testing Laboratory

Thursday, October 4, 8:00 a.m. to 1:30 p.m., \$28
Maximum attendance: 40 (four groups of 10); not fully ADA-accessible; business casual dress, no open-toed shoes

The CPSC Testing Laboratory conducts engineering analyses and testing of consumer products and supports the development of product safety performance standards and test methods. A large part of the lab effort is focused on regulated product testing, such as toys, fireworks, cigarette lighters, wearing apparel, bicycles and bicycle helmets, chemicals, and bunk beds. This testing involves numerous probes and test devices that are based on anthropometric data. Another part of the lab effort supports hazard reduction projects, including



the development of performance requirements for both mandatory and voluntary standards. Current standards development efforts in which lab staff are involved include upholstered furniture, bath seats, bed rails, apparel, mattresses, and camping heaters, in which a variety of human factors issues come into consideration. Tour attendees will view areas in which tests are conducted, such as flammability of apparel and upholstered furniture, toys, children's products (e.g., baby walkers, bunk beds), and mechanical (lighters, helmets), electrical, and combustion products. We will divide the tour group into sub-groups and rotate through a series of testing labs.

#T8 ■ National Federation of the Blind International Braille and Technology Center

Thursday, October 4, 9:30 a.m. to 12:30 p.m., \$25
Maximum attendance: 20; ADA accessible

This hands-on tour of the International Braille and Technology Center, operated by the National Federation of the Blind, will include a discussion of assistive technology development. The Technology Center is the world's most extensive demonstration and evaluation center for computer-related technology serving the needs of blind persons. Housed in the National Center for the Blind, the center has 5500 square feet of laboratory space with \$2.5 million worth of equipment, which is used to better assess, support, and ensure objectivity in the evaluation of assistive technologies. Tour participants will also view the new Jernigan Institute, including the Independence Market and the Jacobus tenBroek Library.

#T9 ■ Uniformed Services University of the Health Sciences (USUHS) National Capital Area Medical Simulation Center

Thursday, October 4, 10:00 a.m. to 1:00 p.m., \$20
Maximum attendance: 28; ADA accessible; requires official U.S. government-issued identification (valid driver's license or passport)

See description for #T4.

#T10 ■ Consumer Product Safety Commission (CPSC) Testing Laboratory

Thursday, October 4, 11:45 a.m. to 4:45 p.m., \$28
Maximum attendance: 40 (four groups of 10); not fully ADA-accessible; business casual dress, no open-toed shoes

See the description for #T7.

#T11 ■ UserWorks, Inc. Usability Lab and Focus Group Facility

Thursday, October 4, 12:30 to 4:30 p.m., \$25
Maximum attendance: 20; ADA accessible

UserWorks is a small business specializing in user research, interaction design, and usability engineering. The facility features a fully equipped usability lab and instrumented focus group room. Digital video recording technology and Web-based application sharing have transformed these facilities in recent years. UserWorks staff will demonstrate typical approaches to usability testing Web sites and information technology devices, including office equipment, medical gadgetry, mobile devices, and biometric workstations. In addition to exercising the in-house lab facilities, these demonstrations will utilize UserWorks' portable usability lab, remote usability testing (interacting with remotely located users and observers), and online focus groups. Attendees can play the role of the study moderator, the participant(s), or interested observers, whether in person or remotely located.

Workshops

Sign up for workshops on the Registration Form by circling the appropriate number. Indicate second choice where applicable. Workshop fees include handout materials and vary depending on computer and audio-visual equipment supplied. **ALL WORKSHOPS ARE ON MONDAY, October 1.** Attendance is limited to 40 persons per workshop. Workshops may be canceled if minimum attendance is not achieved by August 27, 2007.

Expertise levels are as follows: **Beginner** has no prior knowledge or experience; **Novice** is acquainted with the topic but has no detailed knowledge; **Experienced** has good working knowledge with hands-on experience; **Expert** has extensive knowledge and experience.

All registered workshop participants automatically receive Continuing Education Units (CEUs) from North Carolina State University, an authorized International Association for Continuing Education Training (IACET) provider. Earn 0.3 unit for half-day workshops and 0.6 unit for full-day workshops. Proof of CEU credit may be obtained after the meeting by ordering a transcript from NCSU (\$5; details provided with the workshop handouts).

Monday, October 1
Morning Only, 8:30 a.m. to 12:00 noon

1. ■ Stairway Usability and Safety, Part 1: Uses and Falls by Individuals

Jake Pauls, Consulting Services in Building Use and Safety
LEVEL: Novice to Expert; FEE: \$225 members, \$260 non-members, \$75 students.

Stairways are one of the most demanding and dangerous products or environmental elements, but ergonomic considerations in their design, construction, regulation, maintenance, use, and safety are not widely appreciated. This workshop, the first of two on stairways (see Workshop 3), covers essential environmental considerations within the scope of work by practicing ergonomists, designers, builders, public safety authorities, injury prevention practitioners, and attorneys. Participants will gain an appreciation for the size and nature of the problem, a detailed understanding of leading fall scenarios, knowledge of quick and detailed techniques for inspecting stairways, and an improved basis for meaningful participation in model code development, adoption, and enforcement. Participants should have several years of professional experience in one or more of the aforementioned fields. Because a major focus of the workshop is the technical quality of regulatory documents, participants are asked to bring a copy of a recent-edition (e.g., 2003) model building code or standard with which they work (e.g., the IBC, IRC, NFPA 5000 or NFPA 101).

2. ■ Test and Evaluation Methods Supporting Successful Implementation of Ergonomic Improvements

Peter Vink, Ergonomics and Innovation Department, TNO
LEVEL: Novice to Expert; FEE: \$225 members, \$260 non-members, \$75 students.

It's not easy to develop ergonomic solutions that are implemented. Test and evaluation involves employing questionnaires and other tools to measure posture, work pace, usability, and workload, among other things. In this workshop, participants will learn the most crucial