



REGISTRATION INFORMATION

Welcome

The Technical Program Committee welcomes you to New York City for the HFES 52nd Annual Meeting. Building on the future of human factors/ergonomics (HF/E) as celebrated at last year's meeting, our emphasis this year is on continuing the evolution of our Society, our Annual Meeting, and our forms of technical communication and presentation.

We look forward to seeing you this September for the 52nd Annual Meeting in New York!

— *Barrett Caldwell and Cheryl Bolstad, Cochairs*
HFES Technical Program Committee

Meeting Highlights

On Monday, we will offer 15 hands-on workshops on a range of topics. The Plenary Session on Tuesday morning will feature the keynote and presidential addresses, the announcement of newly elected HFES Fellows, and the presentation of this year's Society awards. From Tuesday through Friday, 106 technical sessions will address a diverse array of HF/E topics. The Preliminary Program, containing details about sessions, topics, and speakers, can be found on the HFES Web site, <http://www.hfes.org/web/HFESMeetings/08annualmeeting.html>.

The Gala Opening Reception will be held on Monday evening at the Marriott Marquis Times Square. Your registration fee includes admission to the reception; guest tickets may be reserved at \$55 each. Register by **August 18** to take advantage of early-bird discounts. Online registration is available via the HFES Web site, or simply complete and return the form provided in this booklet.

The On-Site Career Center will be available for employers and HFES member job seekers on Monday, September 22, from 1:00 to 6:00 p.m.; Tuesday, September 23, and Wednesday, September 24, from 8:30 a.m. to 6:00 p.m.; and Thursday, September 25, from 8:30 a.m. to 5:00 p.m. See page 15 for details about meetings between potential employers and candidates during the conference.

September
22–26, 2008

New York Marriott Marquis
Times Square
New York, NY, USA

HFES thanks the following members for their assistance in organizing the 52nd Annual Meeting:

Technical Tours

Mark D. Lee
Emily Friedman
LTC James L. Merlo
Aideen J. Stronge

Student Volunteers

Anand Tharanathan
John R. Morris

Newsletter

Douglas E. Fox

Student Lounge

Monifa Vaughn-Cooke



Accommodations and Transportation

Accommodations

It is no longer necessary to register for the 52nd Annual Meeting in order to book a hotel room at the New York Marriott Marquis Times Square. Although some rooms were still available at the Marriott Marquis (Saturday–Monday, September 20–22) at press time, most are sold out. To inquire about remaining rooms at the HFES rate, call 800/266-9432 (outside the U.S., call 506/474-2009).

Rooms have been also set aside at the Milford Plaza Hotel. To book at the Milford Plaza Hotel (700 8th Avenue, just one block from Times Square), call 1-800-221-2690.

Web sites that provide assistance with hotel booking include the following:

- Hotels.com, <http://hotels.com>
- Travelocity, <http://travelocity.com>
- Orbitz, <http://orbitz.com>
- Priceline, <http://priceline.com>

Student Volunteers Cochair John Morris has set up a student roommate-matching service. If you need to find a roommate, send John an e-mail (john.morris@ttu.edu) and include the following information in your message:

- name
- gender
- university you are attending
- phone number
- e-mail address
- dates of attendance
- housing preference (conference hotel, other hotel)
- preference for housing based on location (closest to conference) or rate (least expensive)
- maximum number of students per room

After John receives these details, he will send the required information to the interested students. Information from interested students will be compiled in a master list, updated regularly, and sent only to students interested in the roommate-matching service. Students are responsible for contacting those who match their preferences and for making their own lodging arrangements.

Transportation

New York is easily accessible from around the world, with flights to three major airports: John F. Kennedy, LaGuardia, and Newark. Affordable flights are available from anywhere inside or outside the United States.

Ground Transportation

Travel time from the airports varies by the time of day: about 40 minutes during non-rush hours from JFK, for about \$45 by taxi; 30 minutes from LaGuardia for \$30 plus tolls; or 40 minutes from Newark and taxi fares up to \$60. Fares from the city back to the

airports may be higher. Again, these times and fares may vary by time of day.

Bus service from the airports is also available: New York Airport Express Bus (\$15, call 718/875-8200) or AirTrain JFK (\$5 to easily accessible city transportation in Queens). There are numerous shuttle van options: \$17 from JFK and Newark and \$15 from LaGuardia via SuperShuttle (800/258-3826) or Airlink New York (877/599-8200, <http://airlinknyc.com>); and private car service is also available (Carmel; call 800/9CARMEL [922-7635]).

The city is accessible by rail from all over the Northeast, with service by Amtrak and New Jersey Transit. Trains arrive and depart every day at both Pennsylvania Station and Grand Central Station. From either depot, it's a short taxi ride to our headquarters hotel.

HFES members are entitled to discounted car rentals from Hertz (800/654-2210 in the U.S. and 800/263-0600 outside the U.S. or <http://www.hertz.com>, discount code CDP #1017806), National Car Rental (800/227-7368, <http://www.nationalcar.com>, discount ID 5282865), and Alamo (800/354-2322 or <http://www.alamo.com>, discount code 558386, rate code BY, coupon code DH5B).

Hotel valet parking charges are as follows: \$55/car, \$65/SUV, \$80/oversize vehicle, plus a \$10 garage access charge per day.

Traveling from Outside the United States

If you are traveling to the meeting to present a paper and you do not come from a country that participates in the Visa Waiver Program (VWEP), you may need a visa. Please visit the National Academies' International Visitors Office Web site (http://www7.nationalacademies.org/visas/Traveling_to_US.html) to view a list of VWEP countries and to determine if this is necessary. It is recommended that visa applicants **apply at least three months in advance of travel**.



Times Square



Registration Details

Annual Meeting Registration

Register online! You may register via the HFES Web site with a credit card. Go to <http://www.hfes.org/web/HFESMeetings/08annualmeeting.html> and follow the link to the online registration form. Online registration will be available through September 26. NOTE: You must provide an e-mail address when using the online registration form so HFES can send you a confirmation. (HFES will never release your e-mail address.) All registrations other than guests include admission to technical sessions (workshops have an additional fee) and the Opening Reception.

HFES members: To receive the member rate on registration, you must enter your five-digit membership ID number. This number can be found on mailing labels affixed to the *HFES Bulletin* and *Ergonomics in Design*, or call Member Services (310/394-1811) for your login ID or member number. See below for details about renewing your membership.

Nonmembers: If you wish to join HFES to receive the member registration rate, please do so before you register for the Annual Meeting. Go to <http://hfes.org> and click "Membership" and then "How to Join" for details. After you submit your online membership application form, HFES will e-mail you your new membership ID number, which you will need in order to register at the member rate. Member registrations are available only to 2008 members in good standing.

Proceedings: Both one-day and full-week registrants will receive the proceedings CD-ROM. CD-ROMs are not included with workshop-only registration. The proceedings will not be available in paper form, but attendees will have access to workstations for viewing and printing papers from the CD-ROM.

Students: Students must validate their registration by presenting a current ID when checking in at the meeting registration desk.

Guests: Guests may attend sessions only if they pay the registration fee. Tickets are \$55 for guests attending the Gala Opening Reception.

Workshops-only registration: If you plan to attend **only** a Monday workshop, you need not pay the one-day meeting registration fee (see pages 6–9 for separate workshop fees).

Save up to \$100 by registering by **August 18** (not applicable for student or workshop-only registrations). You may pay by check, money order, or credit card. Register online or mail your Annual Meeting Registration Form, along with a check (U.S.\$ drawn on a U.S. bank), money order, or credit card information, to the address indicated on the form. **DO NOT SEND CASH.** Fax registrations are accepted with credit card payment; fax the form to 714/957-9112.

HFES Membership Dues Payment

2008 Dues: To be eligible for the member registration fee, your 2008 dues must be paid, and you must provide your five-digit membership ID number on the online or printed Registration Form. If you have not yet paid your 2008 dues, please log in at <http://hfes.org> and select the option "Renew my dues for 2008."

With online renewal, you may pay via a secure credit card transaction or by check; however, if you pay by check, your payment must be received and processed before you can register for the Annual Meeting as a member. You may also renew your 2008 dues by calling HFES at 310/394-1811.

2009 Dues: You may prepay your 2009 dues when you register for the meeting by completing and returning the 2009 Dues Renewal Form in this packet. Include your dues payment on line 2 of the Registration Form and send your Dues Renewal Form to the address on the Registration Form. Again, your 2008 dues must be paid to take advantage of the member discount on Annual Meeting registration. Dues for 2009 may also be paid online at the HFES Web site or by calling HFES at 310/394-1811.

NOTE: If you did not pay 2007 dues, please contact HFES directly (membership@hfes.org, 310/394-1811) to reinstate your membership.

Join HFES!

Want to save up to \$190 on the registration fee for the 52nd Annual Meeting? Then become a member now! You may join the Society as an Affiliate member for 2008. Your membership includes subscriptions to *Human Factors*, *Ergonomics in Design*, the *HFES Bulletin*, the *Directory and Yearbook*, and the new HFES Digital Library-Archive. Plus, you're entitled to discounts on other HFES publications and services. Note that 2009 dues renewal statements will be mailed shortly after the meeting and are due by January 31, 2009. (Membership is from January 1 through December 31.) You may also pay your 2009 dues now, but you will not qualify for the member registration discount unless 2008 dues are also paid.

To join, go to <http://hfes.org> and click "Membership" and then "How to Join." When you complete the online membership application, you may pay by credit card or check. After you receive your membership ID number, log in at <http://www.hfes.org/web/HFESMeetings/08annualmeeting.html> and complete the online registration form to pay by credit card, or use the Registration Form in this packet to pay by check.

Affiliate members may apply to upgrade their membership at any time by completing the appropriate sections of the Application for Membership, available at the meeting, by mail, or at <http://hfes.org>.

Refunds and Cancellations

Refunds for workshops, social events, or professional tours that are sold out or canceled will be provided within four weeks after the meeting. No cash refunds will be made on site.

Persons who have preregistered but are unable to attend the Annual Meeting may obtain a refund of fees paid, less a \$100 processing fee **ONLY if their cancellation request is received in writing by 5:00 p.m. Pacific time on September 12.** Requests should be sent to the address indicated on the Registration Form, or by fax to 714/957-9112. **Refunds will not be granted for ANY cancellation requests received after September 12.**



Student Events and Activities

Student Career and Professional Development Day

Students: Join us on Monday, September 22, for a full-day program devoted to topics of interest to you! Watch the *HFES Bulletin* and Web site for details.

Student Reception

The annual Student Reception will be held on Tuesday, September 23, from 5:00 to 6:00 p.m. (location to be announced in the final program). A cash bar and light snacks will be provided, and the winners of the Student Member With Honors and Outstanding Student Chapter awards will be announced.

Student Lounge

All students are welcome to visit the Student Lounge to relax, meet other students, discuss research ideas, and use the bulletin boards. Students can post and read messages with details about student social activities, directions for where to meet for dinner, or carpool arrangements. In the lounge, students can also participate in mentoring activities and view student chapter information. The location and hours will be provided in the program booklet at the Annual Meeting.

Student Volunteers

Students with confirmed volunteer assignments will receive details about their duties before the meeting and will be directed to check in at the Volunteers Room (to be announced) 30 minutes before their assigned time.

Brooklyn Bridge



Photo © Jeff Greenberg

Special Programs

In addition to tours, workshops, and technical sessions, the following special programs are open to all attendees.

Human Performance in Extreme Environments

The Society for Human Performance in Extreme Environments (HPEE) will hold its Sixth Annual Meeting on September 21–22, 2008, in conjunction with the HFES 52nd Annual Meeting. The HPEE meeting will feature presentations on topics such as space-flight, military operations, underwater and high-altitude activities, extreme sports, and other environments that humans are not naturally suited to endure. Meeting proceedings will be available.

Register online at <http://www.hpee.org>. HFES members are entitled to a discounted rate.

National Ergonomics Month Session

October is National Ergonomics Month! All HFES Annual Meeting attendees and their guests are invited to a special 90-minute NEM session, to be held on Monday, September 22, from 4:45 to 6:15 p.m., immediately preceding the Gala Opening Reception. HFES leaders will share their vision for NEM 2008. The session will also showcase outstanding NEM projects involving schools, community service, and the media. NEM Committee Chair Haydee Cuevas will be on hand with special NEM stickers, bookmarks, and premiums that you can distribute during community events and school visits to promote NEM 2008. The session will also feature several entertaining and informative interactive demonstrations illustrating HF/E principles. Come ready to participate, have fun, and win prizes!

Social Events

Sign up for Special Events on the Registration Form using the code found at the beginning of each event (e.g., #S1). Events are reserved on a first-come, first-served basis with receipt of fully paid registrations.

#S1 ■ Gala Opening Reception

Monday, September 22, 6:30 to 9:00 p.m.

Free to registrants; guest tickets available for \$55 each

Join friends and colleagues at the New York Marriott Marquis Times Square for this festive kickoff reception. See old friends and meet new ones while you enjoy beverages and delicious food.

#S2 ■ Student Reception

Tuesday, September 23, 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.



Technical Tours

Tickets for Technical Tours

For those technical tours not sold out in advance, tickets may be purchased during the meeting at the HFES Registration Desk during the following hours: Sunday, September 21, 3:00 to 6:00 p.m.; Monday, September 22–Wednesday, September 24, 8:00 a.m. to 5:00 p.m.; and Thursday, September 25, 8:00 a.m. to 3:00 p.m. **No waiting lists will be established;** tickets will be sold on a first-come, first served basis.

Sign up for Technical 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 with receipt of fully paid registration. Tours not meeting a minimum attendance by September 2 are subject to cancellation.

#T1 ■ Humanscale

Tuesday, September 23, 2:00 to 6:00 p.m., \$25
Maximum attendance: 30; ADA accessible.

Humanscale has manufactured ergonomic products for the office for more than 25 years with the goal of improving the comfort of those who spend hours each day in front of a computer. The two-hour tour of Humanscale’s headquarters will include a visit to the design studio, where concepts are developed and prototypes are mocked up and tested. The tour will be led by Humanscale’s ergonomists and designers, who will discuss their work process as well as the human factors/ergonomics industry as a whole. The company’s philosophy regarding product design is that technology can make complicated things simple. In addition to designing products, Humanscale also provides ergonomic consulting services focused on ergonomic program development for the workplace. The tour will conclude with a cocktail reception.

#T2 ■ New York Stock Exchange NYSE/Euronext Group

Wednesday, September 24, 9:00 a.m. to 1:00 p.m., \$32
Maximum attendance: 20; no wheelchair access on trading floor; no photography; requires official government-issued identification (valid driver’s license or passport); business attire only.

The New York Stock Exchange is the flagship of the NYSE Euronext Group, which operates the world’s largest and most liquid exchange group and offers the most diverse array of financial products and services. The two-hour NYSE program will include a tour of the trading floor, a review of typical trader workspaces, a presentation of the evolution of voice and data solutions (devices and interfaces) for the mobile trader, a description of a new project to improve the large-venue digital signage system used by traders and broadcasters, and a discussion of the history of human factors at the exchange. The NYSE is one of the most recognized interior spaces in the world. On its trading floor, advanced automated systems are blended with a human-based trading tradition in a constantly evolving hybrid model. Floor traders utilize fixed workspaces and mobile terminals based on role and situation. The ability to deliver effective workspaces and user interfaces is com-

pllicated by the constraints imposed by a 100+-year-old landmark facility, exploding transaction rates, ever more complex trading products, changing business models, and an active regulatory environment. Formal human factors practices have been employed selectively in this context.

#T3 ■ Google New York City Facility

Wednesday, September 24, 1:00 to 4:00 p.m., \$32 (includes snacks)

Maximum attendance: 20; ADA accessible; no photography.

Named for the mathematical term “googol,” Google is arguably the world’s most-utilized search engine, because it is fast, accurate, and easy to use. Though growing rapidly, Google still maintains a small-company feel. The architecture is unique, and the Google culture is even more unique. Googlers work in high-density clusters reflective of the company’s server setup, with three or four staffers sharing spaces with couches and dogs. The Google tour will include a visit to the usability lab, where user feedback is gathered on new products. Aideen Stronge, user experience researcher at Google, will give a presentation on the role that research and design play in the development of Google products and what it’s like to work at Google.

#T4 ■ United States Military Academy at West Point

Thursday, September 25, 9:00 a.m. to 3:00 p.m., \$35 (lunch not included)

Maximum attendance: 50; ADA accessible.

The United States Military Academy, located just 50 miles north of New York City, is the oldest continually operating Army post in the United States. The three-hour tour will begin at the post itself, where visitors will see some of the most historic areas around West Point both on foot and by bus. Lunch follows at Grant Hall, which offers a wide selection of food and drinks at economical prices. After lunch, visitors will be escorted by faculty to the Engineering Psychology Laboratory, located in the Behavioral Sciences and Leadership Department. The labs include engagement skill trainers, a usability laboratory, wireless eye movement analyzers, and a Command Post of the Future simulator. Visitors will also see the Department of Military Instruction’s networked simulations, where up to 100 cadets can perform networked war game simulations before performing the actual maneuvers on the ground. Finally, visitors will explore the Department of Systems Engineering, which provides an immersive environment to model, simulate, and study visualization issues and human interaction within environments and to investigate system performance. Highlights of the tour will include the Information Visualization Laboratory (IVL), Combat Simulation Lab (CSL), Systems Methodology and Design Lab (SMDL), and Computer-Aided Virtual Environment Lab (CAVE).

#T5 ■ Google New York City Facility

Tuesday, September 23, 1:00 to 4:00 p.m., \$32 (includes snacks)

Maximum attendance: 20; ADA accessible; no photography.

See T3 for description.



Workshops

Sign up for workshops on the Registration Form by selecting the appropriate number. Indicate second choice where applicable. Workshop fees include handout materials and vary depending on computer and audiovisual equipment supplied. **ALL WORKSHOPS ARE ON MONDAY, SEPTEMBER 22.** Attendance is limited to 40 persons per workshop. Workshops may be canceled if minimum attendance is not achieved by September 2.

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 (\$10; details provided with the workshop handouts). **Note:** NCSU requires a date of birth for each participant. This information will be shared only with NCSU.

Monday, September 22 Morning Only, 8:30 a.m. to 12:00 noon

1. ■ A Look Toward the Future of the Modern Office

Jerome J. Congleton, Texas A&M University Health Science Center

LEVEL: Novice to Expert; FEE: \$250 members, \$300 nonmembers, \$85 students.

Discover the body's preferred posture and learn how to design products and workspaces utilizing up-to-the-minute furniture workstations and computer accessories. This workshop will provide valuable information to help users maximize their productivity and decrease lost workdays because of injury. Examine how basic ergonomics practices and principles affect the body's anthropometric needs, and consider the latest ergonomics insights and research that pertain to seating and standing workstations. There is also information on accommodating the increasing number of obese workers in today's workforce. Learn practical ways in which proper ergonomics can have a positive and profitable impact on the modern office and still keep pace with the technology of tomorrow. Participants need not have an extensive knowledge of ergonomics, product design, or workspace design to attend this workshop.

2. ■ Biomechanical Job Analysis Using the University of Michigan Three-Dimensional Static Strength Prediction Program™ (3DSSPP)

Donald B. Chaffin & Charles B. Woolley, University of Michigan, Cosponsored by the HFES Education and Training Committee

LEVEL: Experienced to Expert; FEE: \$250 members, \$300 nonmembers, \$85 students.

The 3D Static Strength Prediction Program™ (3DSSPP™) is an ergonomics job analysis and design tool developed by the University of Michigan Center for Ergonomics to quantify biomechanical requirements during manual materials-handling tasks. This modeling tool is intended to be used in the job design and analysis processes to simulate and evaluate manual materials-handling tasks to ensure productive workplaces that minimize the risk of worker injury. At the conclusion of this workshop, the attendee will know when and where the 3DSSPP can be applied, what workplace information is needed to use the software, and how to perform basic operation and output interpretation of the 3DSSPP. This workshop is intended for experienced to expert ergonomics practitioners who are involved in workplace analysis and design. Less experienced individuals with a grasp of biomechanics principles could also benefit, as could academicians who teach occupational biomechanics principles. **NOTE:** Attendees should bring a Windows-based laptop computer to the session. Functional demonstration copies of the 2008 3DSSPP Version 6 will be distributed for use during this workshop. (Use of the software beyond the workshop is subject to University of Michigan licensure requirements.)

3. ■ Identifying and Applying International Ergonomics Computing Standards

Jim Carter, University of Saskatchewan

LEVEL: Beginner to Experienced; FEE: \$250 members, \$300 nonmembers, \$85 students.

International standards help define the expected level of professional practice in many fields, including ergonomic user interface design. As more and more standards are developed, there is a greater need for ergonomics professionals to be able to identify and apply relevant standards. This workshop will provide ergonomists and user interface designers and their managers with an introduction to identifying and applying international ergonomics and user interface standards that are relevant to their work. It will provide an overview of existing standards and new standards. It will also provide strategies for developing an ongoing understanding of the evolving set of standards of which attendees should remain aware. Students and early career professionals will also learn about the state of the practice of international ergonomics standard development. Participants are expected to have a good working knowledge of applying ergonomics to user interface development. Because of the breadth of standards to be considered, participants can range from "beginner" to "experienced" with regard to using standards.



Monday, September 22 Afternoon Only, 1:30 to 5:00 p.m.

4. ■ Engineering Resilience to Create Safety

David D. Woods, Ohio State University

LEVEL: Beginner to Experienced; FEE: \$225 members, \$275 nonmembers, \$50 students.

Resilience engineering is an emerging discipline for conducting proactive safety management for organizations under intense pressure to be “faster, better, cheaper.” Researchers who have closely studied how different systems handle very complex activities recognize that resilience is a critical systems property when organizations are under pressure to be highly productive while also achieving ultra-high levels of safety. This workshop focuses on the concept of resilience in complex systems and its application to proactive safety management. Based on two case studies (NASA space missions and hospital emergency departments), participants will learn the first principles of resilience and how to model and measure the different aspects of adaptive capacity in a complex system. Participants will explore the relationship between resilience and safety, how resilience can contribute to other system performance dimensions, how resilience is a means to manage complexity, and the difference between resilience and safety cultures. No specific background knowledge, materials, or expertise is required.

5. ■ Cognitive Crash Dummies: Predictive Human Performance Modeling for Interactive System Design

Bonnie E. John, Carnegie Mellon University, Cosponsored by the HFES Education and Training Committee

LEVEL: Novice to Expert; FEE: \$250 members, \$300 nonmembers, \$85 students.

Just as crash dummies in the automotive industry save lives by testing the physical safety of automobiles before they are brought to market, cognitive crash dummies save time, money, and possibly lives by allowing computer-based system designers to test their design ideas before implementing them. Cognitive crash dummies are engineering models of human performance that can make quantitative predictions of human behavior on proposed systems without waiting for empirical studies on running prototypes. This three-hour workshop will review the state of the art of predictive modeling in human-computer interaction. Participants will use their own laptops to build a storyboard of an interactive system using CogTool and create a model of skilled performance time on that storyboard. Peer review will provide an opportunity for discussing storyboard and modeling options and trade-offs. The course will end with a review of other available tools and a look to the future of predictive modeling. Participants who bring a laptop will receive a CD-ROM containing the CogTool software application for Macintosh and Windows and CogTool model files used in the workshop.

Central Park

6. ■ Risk Evaluation for the Upper Extremities

Stephen Bao, Washington State Department of Labor and Industries

LEVEL: Novice to Expert; FEE: \$250 members, \$300 nonmembers, \$85.

Musculoskeletal injuries and illnesses in industrialized countries account for a tremendous amount of lost workdays and cost. Many ergonomics practitioners have to perform job evaluations for the purpose of identifying and evaluating risks that may be causing work-related musculoskeletal disorders, and/or quantifying exposure levels to evaluate intervention measures that have been implemented. Many professionals use standardized or published methods such as the ACGIH Hand Activity level TLV, the Strain Index, or the Rapid Upper Limb Assessment method. This workshop will focus on several commonly used exposure assessment methods for the upper extremities and will provide a forum for practitioners to discuss when and how to use which method for their specific job assessment projects. **NOTE:** It is recommended that novice participants read a list of references (to be provided following registration) prior to the workshop.

Monday, September 22 All-Day Sessions, 9:00 a.m. to 4:30 p.m.

7. ■ Test and Evaluation of Complex Systems

Darren S. Cole, U.S. Air Force Flight Test Center

LEVEL: Beginner to Experienced; FEE: \$375 members, \$425 nonmembers, \$150 students.

Test and evaluation is a necessary component in the lifecycle of any product. Attendees of this workshop will be immersed in a hands-on experience that will take them step by step through the process of test design for complex systems. Attendees will learn how to create measurable requirements, decompose the mission of a system into broad tasks, perform a task analysis, model task workload, define test variables, and choose the correct methodologies to evaluate requirements. Although the example used in the workshop is a complex system, concepts from the workshop can easily be applied to simple systems. No specific educational background is required, but knowledge of human factors/ergonomics, psychology, or engineering will be helpful.



Photo © Jeff Greenberg



8. ■ Survey Construction and Use: A Primer for Practitioners and/or Researchers

William F. Moroney, University of Dayton, & Joyce A. Cameron, Writer/Teacher

LEVEL: Beginner to Experienced; FEE: \$350 members, \$400 nonmembers, \$125 students.

Surveys are among the most commonly used tools by human factors/ergonomics researchers and practitioners. However, the skill is usually learned on the job because formal instruction is rarely available. Individuals who have not had formal instruction in survey design and use will benefit, as will those who want to increase their survey-related knowledge and skills. This workshop provides practitioners with strategies for designing surveys. Participants will be introduced to critical issues in survey design, development, and use; advantages/disadvantages of surveys; types of surveys; survey development strategies; scale selection; and ways of evaluating surveys. Capabilities and limitations of Web-based survey tools will be discussed. A functional analysis of the survey design process and a checklist to evaluate the quality of surveys will be provided. Basic statistical analysis and recommendations concerning the presentation of data will be included. Participants will gain a greater appreciation for the complexity involved in developing and employing surveys properly. They will have evaluated and corrected a problematic survey. Finally, they will be provided with information about sources of surveys that can be adapted to meet their needs. Application rather than theory will be emphasized. There are no prerequisites, but active attendee participation is expected.

9. ■ Modeling and Simulation of Human Performance

John Keller, Alion Science & Technology

LEVEL: Beginner to Expert; FEE: \$350 members, \$400 nonmembers; \$125 students.

Over the past few decades, human factors/ergonomics practitioners have increasingly been called on early in the system design and development process. Our goal as HF/E practitioners should be to provide substantive and well-supported input regarding the human(s), his or her interaction(s) with the system, and the resulting human-system performance. This workshop will equip individuals who are considering the use of computer modeling and simulation of human performance with an understanding of what simulation is, when it might be useful, and what specific considerations and approaches should be employed when using simulation to solve problems within the context of system design. Attendees will perform a series of hands-on exercises with pre-built Micro Saint Sharp computer models. They will learn how models are used to solve real-world design problems, including evaluating the necessary word recognition rate to make computer speech input more efficient than mouse input and determining the optimal makeup of a team, given task demands and function allocation. Attendees will also receive hands-on model-building experience through the construction of a simple model to evaluate the workload issues of a human who is driving while using a cell phone.

10. ■ Conducting Cognitive Work Analysis: Supporting Novices and Experts With a Software Tool

Daniel P. Jenkins & Neville A. Stanton, Brunel University

LEVEL: Novice to Expert; FEE: \$350 members, \$400 nonmembers, \$125 students.

Because of its formative constraint-based approach, cognitive work analysis (CWA) has been frequently proposed as a framework for modeling complex sociotechnical systems. This holistic approach focuses on the system environment, the activity that takes place within it, the strategies used to conduct this activity, the way in which the constituent parts of the system (both human and non-human) interact, and the behavior required. The objective of this workshop is to introduce the CWA framework with accompanying software and to present some of the extensions available. Participants should bring a laptop computer in order to use the software that will be provided. This workshop is expected to be of particular interest to those working in safety-critical areas such as defense, the medical field, aviation transport, and power generation. The workshop will introduce CWA from first principles; therefore, no previous understanding is necessary.

11. ■ Impacting System Design Through Human Performance Modeling

Charneta L. Samms & John F. Lockett III, U.S. Army Research Laboratory

LEVEL: Beginner to Novice; FEE: \$600 members, \$650 nonmembers, \$200 students.

Human factors/ergonomics professionals sometimes struggle with getting their design recommendations heard and implemented. Properly conducted analyses can add the quantitative results necessary to support those recommendations more effectively. This workshop combines lecture and hands-on activity to teach participants how to conduct human performance modeling in a way that positively affects system design. Workshop participants will learn a modeling approach that incorporates the principles of experimental design and the power of simulation to produce predictive results about system performance that will influence decisions regarding system design. Using example analyses, participants will learn the basics of human performance modeling using the Improved Performance Research Integration Tool (IMPRINT) and how to use the tool to conduct analyses that can influence system design. This workshop will benefit U.S. government and government contractor HF/E professionals who work on future system designs or major system redesigns. Although experience with hierarchical task analysis is desirable, no other expertise beyond basic computer skills within a Windows environment is required for the workshop.



12. ■ Managing Human Error in Complex Systems

Scott Shappell, Clemson University, & Douglas Wiegmann, University of Wisconsin

LEVEL: Beginner to Expert; FEE: \$350 members, \$400 non-members, \$125 students.

Human error is associated with 60%–80% of all incidents/accidents in complex, high-risk systems such as those in the aviation, health care, mining, and nuclear power industries. This intensive full-day seminar provides training in the application of innovative methods for managing human error that are scientifically derived, empirically tested, and proven in the field. Participants will learn how to turn errors into information, information into knowledge, and knowledge into effective error management solutions. During the workshop, participants will gain hands-on experience with two error management tools that have been used worldwide in the safety industry: the Human Factors Analysis and Classification System (HFACS) and the Human Factors Intervention Matrix (HFIX).

13. ■ Human-Systems Integration: Integrating the Domains

Dennis J. Folds, Georgia Tech Research Institute

LEVEL: Novice to Experienced; FEE: \$350 members, \$400 nonmembers, \$125 students.

Human-systems integration (HSI) is more than just good human factors engineering. An effective HSI program unites eight technical domains (human factors engineering, personnel, manpower, training, safety, occupational health, survivability, and habitability) and allows the practitioner to address human-related issues in system development in an integrated manner. In this workshop, attendees will learn the overall goals and benefits of HSI and how integrating the domains can achieve a better outcome than practicing the domains separately. Participants will become familiar with basic principles in each of the HSI domains and will gain an understanding of the rationale for conducting an integrated HSI program. Topics include program planning, requirements and metrics, analyses, and trade-offs among HSI domains. Practitioners with experience in one or more of the domains will benefit from the workshop, and practitioners who are focused in the human factors domain will particularly benefit. Participants should have a background in at least one of the domains.



Midtown Manhattan

Photo © Jeff Greenberg

14. ■ The Road to Cognitive Systems Engineering

Cindy Dominguez, Gary Klein, & Cory Fallon, Klein Associates; Gavan Lintern, General Dynamics; & Laura Militello, University of Dayton Research Institute

LEVEL: Novice to Experienced; FEE: \$350 members, \$400 nonmembers, \$125 students.

Cognitive systems engineering (CSE) is a design approach aimed at improving cognitive work by linking system features to the cognitive processes they need to support. Cognitive processes are activities that require complex cognitive skills such as identifying, judging, attending, perceiving, remembering, reasoning, deciding, problem solving, and planning. This workshop will introduce participants to the major concepts of CSE and to selected data collection, analysis, and design methods. About half the workshop will be devoted to exercises in analysis and design. The aim is to help participants develop their basic skills to a level that will enable them to continue to build expertise in CSE as they use the methods in their own work. The exercises are tutorial in nature and oriented specifically toward abstracting and clarifying essential concepts and methods.

15. ■ The World Is My Lab: Field Observations of Communication Behaviors

Cheryl L. Coyle & Heather Vaughn, Bell Laboratories

LEVEL: Novice to Expert; FEE: \$350 members, \$400 nonmembers, \$125 students.

Human factors/ergonomics researchers and practitioners who conduct field research will benefit from this workshop, which focuses on the exchange of ideas about how to study the communication behaviors of young people (ages 12–24). Included in the workshop is a real-time fieldwork activity designed to elicit motivated discussion on how to collect and report on observational data. Participants will supply a preworkshop report on fieldwork previously conducted (*or* on fieldwork they would like to conduct) involving young people in public places using communication devices. The goal of the workshop is to cross-pollinate ideas about methods for collecting observational data as well as reporting on those observations.

Technical Sessions

The preliminary program for the HFES 52nd Annual Meeting is available at the HFES Web site, <http://hfes.org>. It can be searched by author name, keyword in title, technical group, and date/time. The itinerary builder assists in creating a personal schedule for the meeting.



Human Factors and Ergonomics Society 52nd Annual Meeting

September 22–26, 2008, New York, NY USA

Please complete BOTH pages of form.

Early registration deadline: AUGUST 18, 2008

Online and fax registrations will be accepted through 5:00 p.m. Pacific time on September 12, 2008.

On-site registration opens Sunday, September 21, 2008, at 3:00 p.m.

PERSONAL INFORMATION

(Please type or print. Asterisks * indicate required fields. HFES will send your registration confirmation by e-mail.)

*Name: Last, first, middle initial

Grid for name entry

Badge Information

Company or affiliation: _____

*Mailing address: _____

*City: _____ *State: _____ *Zip: _____

*Country: _____ *Phone: _____

Fax: _____ *E-mail: _____

First name or nickname as it should appear on badge: _____

I am an HFES member (enter your membership number here; it appears above your name on HFES publication mailing labels, or contact HFES at membership@hfes.org, 310/394-1811): _____

(If you are not a member and would like to join HFES to be entitled to discounted registration, see page 3.)

Disabled access required. Attach a note explaining your needs on a separate page.

*Please check one option: I do / do not allow HFES to release my mailing address to annual meeting exhibitors and advertisers.

Please check here if this is your first HFES Annual Meeting.

Demographic Information

*Please check your primary employment sector below:

Academia Industry Government Military Consulting Retired Other (specify: _____)

REGISTRATION FEES

All registrants receive the proceedings CD-ROM. Only those who have paid registration fees may attend technical sessions.

HFES members: Your 2008 dues must be paid in order to take advantage of member registration rates. If you have not already done so, please log in at <http://hfes.org> with your username and password and select the option "Renew my dues for 2008." If you need your username and password, please contact HFES Member Services at membership@hfes.org or 310/394-1811.

Full week	Postmarked/faxed		One day	Postmarked/faxed	
	ON OR BEFORE Aug. 18	AFTER Aug. 18		ON OR BEFORE Aug. 18	AFTER Aug. 18
HFES member	<input type="checkbox"/> \$495	<input type="checkbox"/> \$595	HFES member	<input type="checkbox"/> \$235	<input type="checkbox"/> \$260
Nonmember	<input type="checkbox"/> \$685	<input type="checkbox"/> \$785	Nonmember	<input type="checkbox"/> \$285	<input type="checkbox"/> \$325
Transitional Assoc. Member	<input type="checkbox"/> \$240	<input type="checkbox"/> \$265	Transitional Assoc. Member	<input type="checkbox"/> \$115	<input type="checkbox"/> \$130
Emeritus Member	<input type="checkbox"/> \$150	<input type="checkbox"/> \$150	Emeritus Member	<input type="checkbox"/> \$ 75	<input type="checkbox"/> \$ 75
Student Member	<input type="checkbox"/> \$150	<input type="checkbox"/> \$150	Student Member	<input type="checkbox"/> \$ 75	<input type="checkbox"/> \$ 75
Student Nonmember	<input type="checkbox"/> \$185	<input type="checkbox"/> \$185	Student Nonmember	<input type="checkbox"/> \$110	<input type="checkbox"/> \$110
			Workshop Only	<input type="checkbox"/> \$ 0	<input type="checkbox"/> \$ 0

One-day registrants: Which day will you attend? (check one): Mon. Tues. Wed. Thurs. Fri.

Subtotal #1 (Registration) \$ _____



OTHER FEES

HFES Dues Payment

HFES members: If you would like to prepay your 2009 membership dues when you pay for meeting registration, please fill out the **2009 Dues Renewal Form** found at <http://www.hfes.org/web/HFESMeetings/09DuesPaymentForm.pdf> and enter the dues amount on subtotal line 2 below. Mail or fax the completed form to the address below. The member registration discount is available only to those who have paid 2008 dues. If you have not paid 2008 dues, please go to <http://hfes.org> and log in using your member number and password to complete your 2008 renewal, or call HFES at 310/394-1811. You may also prepay your 2009 dues at the HFES Web site or by calling HFES.

Subtotal #2 (HFES dues) \$ _____

Opening Reception (Guests only)

No. tickets

Subtotal

Please reserve _____ guest tickets to Opening Reception × \$55 (each) = \$ _____

Spouse/guest name or nickname for badge: _____

Subtotal #3 (Opening Reception Guest Ticket) \$ _____

Technical Tours (See <http://www.hfes.org/web/HFESMeetings/08AMTours.html> for descriptions and fees.)

Tour # _____ \$ _____ Tour # _____ \$ _____

Tour # _____ \$ _____ Tour # _____ \$ _____

Subtotal #4 (Technical tours) \$ _____

Workshops (See <http://www.hfes.org/web/HFESMeetings/08AMWorkshops.html> for descriptions and fees.)

All workshops take place on Monday, September 22. Indicate your selections (maximum of two workshops) on the lines below. Please indicate alternate selections below in the event your first choice is sold out. **NOTE: Your date of birth is required for CEU registration. This information will be shared only with North Carolina State University, our CEU provider.**

Workshop 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

Selection #1: _____ \$ _____ Alternate selection #1: _____

Selection #2: _____ \$ _____ Alternate selection #2: _____

*Date of Birth: _____

Subtotal #5 (Workshops) \$ _____

TOTAL PAYMENT

Recap of fees due:

#1. Registration Fees \$ _____

#2. 2009 Dues Payment \$ _____

#3. Opening Reception Guest Ticket(s) \$ _____

#4. Technical Tours \$ _____

#5. Workshop Fees \$ _____

TOTAL FEES DUE TOTAL AMOUNT PAID \$ _____

TAKE ADVANTAGE OF THE EARLY REGISTRATION DISCOUNT. Forms must be postmarked and accompanied by payment no later than 5:00 p.m. Pacific time on **Friday, August 18**. Register by check (only U.S. dollars drawn on a U.S. bank), money order, or credit card.

Check one of the following:

Check/Money Order (payable to Human Factors and Ergonomics Society) **MasterCard** **VISA** **American Express**

Name on card: _____ Signature: _____

Card number: _____ Expiration date: _____

Billing zip/postal code: _____

Fax registrations are accepted with credit card payment only. Do not send cash. Sorry, we cannot accept registrations over the phone. Refunds for sold-out or canceled tours, workshops, or special events will be made after the meeting. **Registration refunds will be made only for written requests received by 5:00 p.m. PDT on September 10, 2008.**

Send payment and this form to: HUMAN FACTORS AND ERGONOMICS SOCIETY
Annual Meeting Registration Office, 1231 E. Dyer Rd., Suite 240, Santa Ana, CA 92705

FAX (credit card payment only): 714/957-9112

HOTEL RESERVATIONS

To reserve a hotel room at the special meeting rate, you must first register. If you register online, you will be given the option to reserve a room at the completion of the registration process. If you are registering by mail or fax using this printed form, please be sure to download the Hotel Reservation Form, complete it, and fax or mail it with your Registration Form. The Hotel Reservation Form is available at <http://www.hfes.org/web/HFESMeetings/08HotelReservationForm.pdf>.



Human Factors and Ergonomics Society 52nd Annual Meeting

September 22–26, 2008, New York, NY USA

- In order to register for the 52nd Annual Meeting at the member rate, your 2008 dues must be paid. If you have not paid 2008 dues, please go to <http://hfes.org> and log in using your member number and password to complete your 2008 renewal, or call HFES at 310/394-1811.
- You may use this form to prepay your 2009 dues at the same time you pay your Annual Meeting registration fees. (You may also prepay 2009 dues online at <http://hfes.org>.)
- Dues for 2009 cannot be accepted unless you are a current member.
- Membership is for the calendar year (January 1–December 31).
- Transfer the total membership dues payment to the Annual Meeting Registration Form, Subtotal line 2.
- **Fax this completed form along with your Registration Form to 714/957-9112.**

Full name (Please print): _____

Member ID: _____

Daytime telephone: _____

E-mail: _____

A. Membership Dues

FULL MEMBER, FELLOW, ASSOCIATE, AND AFFILIATE

2009 Membership Dues	\$190	\$ _____
2009 Contributing Member	\$285	\$ _____
2009 Supporting Member	\$380	\$ _____
2009 Sustaining Member	\$900	\$ _____

STUDENT AFFILIATE MEMBER

To requalify for this rate, you must still be a full-time student at an accredited college or university. Current student ID is required at the meeting.

School: _____

Anticipated degree (e.g., M.A., Ph.D.): _____

Month and year of graduation: _____

2009 Student Affiliate membership dues: \$35 \$ _____

TRANSITIONAL ASSOCIATE MEMBER DUES

If you are (a) graduating this year and are a current member of HFES or (b) in your first year of Transitional membership, you are eligible for a 50% discount off the regular dues.

2009 Transitional Associate membership dues: \$95 \$ _____

TOTAL "A" MEMBERSHIP DUES \$ _____

B. Technical Groups

CHECK THE TGS YOU WISH TO JOIN OR RENEW

Aerospace Systems	AS	\$6.00	\$ _____
Aging	A	\$5.00	\$ _____
Augmented Cognition	AC	\$4.00	\$ _____
Cognitive Engineering and Decision Making	CE	\$6.00	\$ _____
Communications	C	\$6.00	\$ _____
Computer Systems	CS	\$6.00	\$ _____
Education	E	\$4.00	\$ _____
Environmental Design	ED	\$3.00	\$ _____
Forensics Professional	FP	\$5.00	\$ _____
Health Care	HC	\$4.00	\$ _____
Human Performance Modeling	HP	\$5.00	\$ _____
Individual Differences in Performance	ID	\$4.00	\$ _____
Industrial Ergonomics	IE	\$4.00	\$ _____
Internet	I	\$0	\$ _____
Macroergonomics	ME	\$5.00	\$ _____
Perception and Performance	PP	\$5.00	\$ _____
Product Design	PD	\$6.00	\$ _____
Safety	S	\$6.00	\$ _____
Surface Transportation	ST	\$5.00	\$ _____
System Development	SD	\$5.00	\$ _____
Test and Evaluation	TE	\$5.00	\$ _____
Training	T	\$4.00	\$ _____
Virtual Environments	VE	\$5.00	\$ _____
TOTAL "B" TECHNICAL GROUPS DUES			\$ _____

C. Human Factors: The Journal of HFES

Please choose ONE Human Factors delivery option below:

- Print **only** (Benefit of membership)
- Online **only** (Benefit of membership – e-mail address required)
- Print **plus** Online (add \$50 in Total "C" below – e-mail address req'd)

D. Journal of Cognitive Engineering and Decision Making

To subscribe, please choose ONE JCEDM delivery option below:

- Print **only** \$ 88 \$ _____
- Online **only** (e-mail address required) \$ 80 \$ _____
- Print **plus** Online (e-mail address required) \$106 \$ _____

E. Totals

Total "A": 2009 dues	\$ _____
Total "B": HFES Technical Groups dues	\$ _____
Total "C": Print plus Online Human Factors Delivery	\$ _____
Total "D": Subscription to JCEDM	\$ _____
TOTAL "A/B/C/D" MEMBERSHIP DUES PAYMENT	\$ _____

Transfer TOTAL "A/B/C/D" amount to the Subtotal line 2 on the Annual Meeting Registration Form.



HFES Career Center

Online and On-Site Employment Services Exclusively for Human Factors/Ergonomics Professionals

Online Database of Jobs and Candidates

■ EMPLOYERS ONLINE

If you are an employer seeking full- or part-time staff or interns, HFES offers the leading online Career Center devoted exclusively to human factors/ergonomics (HF/E) professionals all over the world.

More than 40% of HFES members hold a doctorate, 33% hold a master's degree, and about 15% have a bachelor's degree (as the highest degree held in all categories).

To recruit top HF/E professionals, visit our Web site <http://hfes.org> and post a job, search the résumés, or do both. Candidates searching the database can send their résumés directly to your desktop.

■ CANDIDATES ONLINE

This service is for HFES members only! Post your résumé at <http://hfes.org> and search our database of available jobs. If you see a job posting that interests you, you can e-mail your résumé directly to the employer. If you prefer to remain anonymous, the "Confidential" selection protects your identity until you choose to become known to the employer.

On-Site Career Center at the HFES Annual Meeting

At each HFES Annual Meeting, the on-site Career Center provides an outstanding opportunity for employers and job seekers to meet informally and in prearranged interviews. The Career Center is open only to those registered at the meeting

■ CAREER CENTER HOURS:

Monday, September 22

1:00 p.m. to 6:00 p.m.

Tuesday–Wednesday, September 23–24

8:30 a.m. to 6:00 p.m.

Thursday, September 25

8:30 a.m. to 5:00 p.m.

■ EMPLOYERS ON SITE

Active subscribers to the HFES online Career Center may reserve a booth or table at the on-site Career Center. For a reservation form, call or e-mail HFES at 310/394-1811 or placement@hfes.org.

Employers are encouraged to post job openings on the HFES Web site <http://hfes.org> as soon as possible. This will provide candidates the time to search the database and employers the time to review résumés and schedule meetings with potential candidates. **The scheduling of formal or informal interviews at the HFES Annual Meeting is the sole responsibility of the employer.**

■ CANDIDATES ON SITE

This service is for HFES members only! Only HFES members may post résumés, search for jobs, and participate in the Career Center. Prior to the annual meeting, candidates looking for a job or seeking new career opportunities are encouraged to post their résumés and search for jobs on the HFES Web site, <http://hfes.org>.

If you plan to be available for interviews at the HFES 52nd Annual Meeting, bring copies of your résumé to the meeting and check the HFES Web site to see a listing of the employers who will be conducting interviews during the Annual Meeting.



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Early Registration Deadline ————— **August 18**



Register Online!

Visit the HFES Web site (<http://hfes.org>) and follow the link to the online registration form. Credit card transactions are secure.

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