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The Need for Human Factors/ Ergonomics Involvement in Electronic Voting Systems

By *Bill Killam*

Since the 2000 U.S. presidential election and the concomitant increase in awareness of human factors/ergonomics (HF/E) problems with electronic voting systems, a great deal of work has been done to address these issues. Many of the efforts described below are likely to have some effect, but they are unlikely to be sufficient, and it is unclear where future funding will come from to solve these problems.

What is clear is that HFES members have the capacity to help ensure that electronic voting systems meet the needs and skills of a wide variety of voters. This article highlights areas in which further HF/E research and application could lead to improvements.

Lack of Standardization Presents Problems

Although more than 225 million Americans are eligible to vote, only slightly more than half choose to do so (U.S. Census, 2006). To what extent do usability issues negatively affect this percentage?

For one thing, uniformity is lacking. Currently, states manage the election process, and each voting district (comprising cities and counties within the state) is allowed to use the voting system of its choice. Some states mandate that all voting systems purchased within the state must meet the Voluntary Voting System Guidelines (VVSG) prior to being purchased, but this is not a universal requirement, and only about half of those states enforce the guidelines.

Second, until recently, VVSG standards have not directly addressed the ability of the voter to perform the intended task of voting; they have provided only design guidelines. As a result, voting system interfaces vary significantly.

Under federal law, voting systems must be made available to every U.S. citizen who is eligible to vote, including all users with disabilities. But because the regulatory standards of voting systems are not applied to the extent of other activities with a similar user base (such as driving on U.S. roadways or using a cell phone), they do not go far in meeting user accessibility requirements.

Any person who wishes to legally operate a motor vehicle in

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Jeff Kelly

Stepping Into the Next 50 Years

By *John F. (Jeff) Kelley, HFES President*

Our Annual Meeting in Baltimore was a great first step for this newly installed HFES president! I mentioned at the closing plenary that my formal goals for the coming year are to continue Marv Dainoff's and Waldemar

Karwowski's legacy of redirecting the governance of the Society toward more strategic thinking by using principles of knowledge-based governance, combined with continuing empowerment of committees, technical groups, and chapters.

I also have a personal vision that crystallized during Waldemar's Town Hall Meeting on Monday, where the assembled leaders brainstormed the following three high-level strategic goals (my interpretation):

- Make HFES the central, premier source of human factors/ergonomics (HF/E) science and practice information.
- Make HFES the acknowledged leader in science and practice for "the other 80%" (think globally).
- Practice what we preach.

My germ of a personal vision took root during the presidential forum run by Marv, wherein seven panelists presented responses to Marv's call for ideas on how to bridge the gap between research and practice.

I will provide more details about this emerging idea in my next *HFES Bulletin* article. For now, suffice it to say that the basic theme is to move with alacrity to harness the chaotic power of Web 2.0 (or, in Thomas Friedman's language, "Globalization 3.0") to inform and empower the public to be part of a disruptive, grassroots market force for better HF/E design in the things we use (or that use us). The metaphor I used on Friday, October 5, was that the new Internet-fueled flattening of our planet is a giant wave headed our way, and we will either hop on the surfboard and shoot the curl or drown.

The picture I will paint for you will depict a chain of events linking the six constituencies that I believe are important for delivering

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Stepping Into the Next 50 Years

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a better quality of life through HF/E. All of us have spent time and energy alternately wearing two or more of these hats:

- educators and/or designers of research agendas,
- researchers,
- HF/E practitioners,
- developers,
- project managers and stakeholders (including executive decision makers), and
- end users/consumers.

If you think about it, a common frustration we share is the difficulty in pushing our message from #1 toward #5 (and back to #4) to benefit #6 (draw the flowchart in your head). My idea involves making an end-run around #4 and #5 and engage #6 to push the message backward from the marketplace to the boardroom.

I perceive two key facilitators to my vision: the flattening of Internet communications afforded by Web 2.0, and having compelling and memorable stories to tell. The obvious stories are technical ones – what we do and how we do it. Perhaps more memorable will be the personal ones – why we do what we do.

On the latter topic, you may have been aware of the presence of StoryCorps® at the Baltimore meeting. We produced one-hour, facilitated co-interviews in which two or more HF/E colleagues talked about why they do what they do. I urge you to keep an eye on the Web page that I put together for this project: <http://hfstorycorps.org>. I will post the full interviews there after I receive the materials (or you will be able to find them in the National Archives).

So, if you're as excited as I am to spread the word about what we do (and why we do it), and if you share the motivation to make HFES the premiere source of HF/E science and practice, watch this space. If we put our heads together, we should be able to come up with some great ideas!

HFES President John F. (Jeff) Kelley, Ph.D., CPE, is a senior managing consultant for usability engineering with IBM Global Business Services and an adjunct professor at Georgia Institute of Technology, Atlanta.



The Need for HF/E Involvement in Electronic Voting Systems

(continued from page 1)

the United States must complete a written exam and take driving lessons and is licensed provisionally for 1 year before becoming fully licensed. To a lesser extent, the cell phone industry is regulated in part by federal standards. Municipal regulations, such as banning cell phone use while driving, are determined by individual states.

Unlike talking on a cell phone or driving a car, voting is an extremely infrequent activity. The voter is not able to hone his or her skills over time. There is no licensing of a voter, and little or no training is provided prior to using a voting machine. Voting is conducted under the pressure of traveling to the polling location, waiting in line, completing the voting task before the polls close, and performing the task accurately.

Voting systems represent a unique and significant design challenge, as evidenced by findings from every election since 2000 (although the problems were present but ignored for many years prior to that time). Reports have suggested that HF/E issues are still affecting the outcome of elections. For example, a recent incident in Florida suggested that a design flaw in the layout of a ballot led many voters to ignore a contest on the ballot that was won by a margin of only 369 votes. In addition, confirmed reports of touch-screen calibration issues have cast doubt on the accuracy of other elections.

Ongoing Efforts Toward Improved Voting Systems


HF/E issues that affect elections are being addressed. The CalTech/MIT voting technology project, established in 2000, has continued to produce research on various aspects of voting, including some HF/E issues (see <http://web.mit.edu/newsoffice/topic/voting.html>). The Johns Hopkins University Center for Correct, Usable, Reliable, Auditable, and Transparent Elections (ACCURATE), which is funded by the National Science Foundation (NSF; see http://www.jhu.edu/news_info/news/home05/aug05/rubin.html), has produced studies primarily in the area of voting system security and has reported on several human factors-related issues (for example, unclear or misleading ballots, technical glitches in electronic voting formats, and the development of electronic cryptology to ensure voter anonymity). Researchers at the University of Maryland have conducted an NSF-sponsored study of performance on voting machines that are currently in use. Ohio, Florida, and, most recently, California have conducted assessments of voting systems security, accessibility, and use.

At the federal level, the VVSG has undergone one major rewrite since the 2000 election and is still being revised. Revisions include ballot design issues and the development of pass/fail criteria and an accompanying test protocol for human performance.

Areas of Opportunity for HF/E Involvement

Human factors/ergonomics professionals should seek opportunities to help by participating in research, design, and testing.

Although some research projects have advanced our knowledge of specific design issues (such as the extent to which the use of male or female voices for audio output affects voting decisions), comprehensive knowledge in this area is sadly lacking. The VVSG includes numerous design guidelines that have never been tested,



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Invitation for Applications for Fellow

either in isolation or in combination, to ensure they have the desired effect. For example, the currently proposed guidelines provide mandates for contrast ratios and character height, but these have never been tested independently or in combination in this context. Additionally, the new guidelines state that adjustments are needed for color saturation levels but not for color hues. It's unclear where this guideline came from or why the other related issue is not addressed.

The recent awarding of Pew Charitable Trust grants (see http://www.pewtrusts.org/our_work.aspx?category=490) can help to minimize – but not eliminate – the gap in our knowledge, but more research is needed.

On the design side, vendors have issues that must be dealt with immediately. For example, some vendors have been working with accessibility research organizations such as the Trace Center to develop interfaces to support users with disabilities, but this is not the only area of design that needs attention. Designing for these users presents a range of unique design problems that HFES members can address. For example, touch-screen technology cannot be used by a large segment of the population that includes people with physical disabilities from tremors, more serious motor issues, or paralysis. Current designs do not accommodate people with visual impairments, including low vision, visual defects (e.g., color blindness, astigmatism), and total blindness.

The area with the most promise for HF/E involvement, and which could have an immediate effect, is product testing. Though both basic and applied research are necessary to develop guidelines for new designs, voting systems should ultimately be judged on whether the intended user can successfully cast a ballot without difficulty. Soon the federal guidelines will include a federal-level evaluation of the ability of voters to use the equipment, but this evaluation is not specific to a machine, target audience, or ballot. Vendors conduct their own tests during design; states should conduct tests prior to purchasing a machine and whenever a new ballot is created.

There is vast potential for HF/E involvement on the local level, given the fact that every voting district in every state needs to move closer to uniformity in voting systems. In addition, supportability is an area that merits attention. The people who set up, support, and take down the equipment are usually volunteers – often elderly – who have minimal experience with current voting systems. The needs of these audiences have yet to be addressed in any meaningful way.

Through improvements in technology, we are addressing usability inconsistencies and moving toward system homogeneity. But given the nature of the current localized structure, further study toward improving voting system standards is ripe for vigorous action.

Reference

U.S. Census Bureau. (2006). *Voting and registration in the election of 2004*. Retrieved October 26, 2007, from <http://www.census.gov/population/www/socdemo/voting.html>.

Bill Killam, a member of HFES since 1985, is the president of User-Centered Design, Inc., a human factors engineering consulting firm in the Washington, D.C., area specializing in product design and testing. His firm has been consulting with NIST and the EAC on the HF/E issues of voting machines since 2004.



The Human Factors and Ergonomics Society's Fellows Selection Committee invites applications for Fellows and Honorary Fellows to be elected in 2008. "Fellow" is a special class of Society membership, as established in the Bylaws, Article I, Section 4. Individuals may apply for Fellow status on their own behalf, or they may submit an application on behalf of another.

Election to Fellow status is an honor conferred that recognizes outstanding achievement, consistently superior professional performance, exceptional contributions, service to the Society, and other meritorious accomplishments. For Honorary Fellows, there is no criterion of service to the Society. Any Full Member of the Society in good standing (except members of the Fellows Selection Committee) may apply or nominate by completing the application forms for Fellow. No limitation is placed on the number of times a Member may be considered for election to Fellow or Honorary Fellow.

Prospective applicants should carefully review the rules and regulations for Fellow designation and the guide for preparing the contribution statement in the application package prior to initiating the process.

Applicants must obtain recommendations of support for the candidate from three other Full Members. The meritorious contributions of the applicant must be detailed in the application form and must be supported by evidentiary documentation included with the package.

The Fellow Application Package, including instructions, nomination and recommendation forms, and supporting information, may be obtained from HFES, P.O. Box 1369, Santa Monica, CA 90406-1369, carlos@hfes.org. The completed application package (application form, recommendation form, candidate's vitae or résumé, and supporting documentation) must be received by the Fellows Selection Committee at the HFES Central Office on or before **February 1, 2008**. Applications approved by the Fellows Selection Committee, chaired by Ian Noy, and the Executive Council are recommended for approval by the Fellows at large. Candidates who are approved at all three levels will receive Fellow designation at the 2008 Annual Meeting.



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Call for Nominations for IEA Fellow

By *Michelle M. Robertson, HFES IEA Representatives Committee Member*

The International Ergonomics Association (IEA) invites HFES members to nominate HFES Fellows and Honorary Fellows for the IEA Fellow Award. The IEA Fellowship was created to recognize extraordinary or sustained, superior accomplishments of an individual to the ergonomics profession or discipline at an international level.

To be considered by the IEA Awards Committee for IEA Fellow, candidates must meet two eligibility criteria: (a) international service (including such activities as service to IEA, an extensive publication record in international journals, international consulting, or service to the United Nations or similar organizations) and (b) membership in an IEA federated (e.g., HFES) or affiliated society for at least 10 years. HFES endorsement for this award further requires that the nominee be an HFES Fellow or HFES Honorary Fellow. Additional information about the award, nomination form, and list of past recipients can be found at the IEA Web site, <http://www.iea.cc/>. Award recipients will be formally recognized at the 17th Congress of the International Ergonomics Association, August 9–14, 2009 in Beijing, China.

Nominations are due to HFES by **March 1, 2008**. Note that this deadline is earlier than that shown on the IEA Web site because nominations from HFES require prior endorsement from the Society before they are forwarded to the IEA.

Please send an electronic copy of a completed nomination form, a copy of the nominee's current CV, and any supporting material to Michelle Robertson, HFES IEA Delegate Committee Member, michelle.robertson@libertymutual.com. Questions may be directed to Executive Director Lynn Strother (lynn@hfes.org). Additional information regarding IEA triennial awards can be obtained at <http://www.iea.cc> and from IEA Awards Chair and Past President Pierre Falzon, falzon@cnam.fr. ☉

ANNUAL MEETING

2007 HFES Fellows and Awardees

The Human Factors and Ergonomics Society elected four Fellows and presented several awards at the HFES 51st Annual Meeting Opening Plenary Session in Baltimore.

Newly elected Fellows are **Mary Carol Day**, manager of human factors organizations at AT&T/Bell Laboratories; **Francis T. Durso**, professor at Texas Tech University; **Gerald P. Krueger**, principal research ergonomist/scientist with Krueger Ergonomics Consultants; and **K. Ronald Laughery**, chief scientist at Alion Science & Technology MA&D Operation.

Lloyd D. Tripp, Joel S. Warm, Gerald Matthews, Peter

Chiu, Paul Werchan, and John E. Deaton received the 2007 Jerome H. Ely *Human Factors* Article Award for their paper, “+Gz Acceleration Loss of Consciousness: Time Course Performance Deficits With Repeated Experience,” published in the Spring 2006 issue. The article examined gravity-induced loss of consciousness, its duration, and its effects with regard to repeated incidence of this phenomenon.

Patricia Ann Scott was honored with the 2007 Distinguished International Colleague Award for her accomplishments as an educator, researcher, and promoter of ergonomics in South Africa and the African continent and throughout the industrially developing world.

Deborah A. Boehm-Davis received the Paul M. Fitts Education Award in recognition of her international reputation among both students and peers as an exceptional educator. She joined the George Mason University faculty in 1984. Boehm-Davis served as HFES president in 1993–1994 and is a Fellow of both HFES and the American Psychological Association (APA).

In recognition of his continuing efforts in the field of occupational safety, **Peter A. Hancock** received the A. R. Lauer Safety Award. Hancock has authored numerous articles, and his publications dealing with safety concern aviation, ground transportation, gerontology, and sports medicine, among other domains.

Jay G. Pollack earned the Alexander C. Williams, Jr., Design Award for his development of the Crown TSP 6000, a high-density warehouse turret stock picker that has been enthusiastically received by warehouse and equipment operators alike.

Thomas K. Ferris, Shameem Hameed, Robert Penfold, and Nikhil C. Rao received the Alphonse Chapanis Best Student Paper Award for “Tactons in Multitask Environments: The Interaction of Presentation Modality and Processing Code.”

Eduardo Salas was honored with the Jack A. Kraft Innovator Award for his numerous efforts to extend and diversify the application of HF/E principles and methods to new areas – specifically in the areas of team performance and training effectiveness. Also honored were Salas' cutting-edge research contributions in space, aviation, military, medical, and corporate applications.

Eduardo Salas, Katherine Wilson, C. Shawn Burke, Dennis C. Wightman, and William R. Howse received the Best *Ergonomics in Design* Article Award for their feature, “A Checklist for Crew Resource Management Training,” published in the Spring 2006 issue. The authors distilled the complex and far-ranging existing research on CRM into a set of simple principles that are applicable across various contexts.

Najmedin Meshkati received the Oliver Keith Hansen Outreach Award in acknowledgment of his scholarly efforts, editorial pieces, media interviews, and continued advocacy of HF/E, which has served to increase the general public's awareness of the field. Meshkati's research and published works on major industrial accidents and disasters around the world have focused on risk reduction and reliability enhancement of complex and large-scale sociotechnical systems.

Donald B. Chaffin received the Arnold M. Small President's Distinguished Service Award in recognition of his career-long contributions that have brought honor to the human HF/E discipline and HFES. Chaffin recently retired as professor of industrial and operations engineering, biomedical engineering, and environmental health sciences at the University of Michigan.



Mary Carol Day



Francis R. Durso



Gerald P. Krueger



K. Ronald Laughbery



(L-R) Lloyd D. Tripp, Gerald Matthews,
Joel S. Warm



Patricia Ann Scott



Deborah A.
Boehm-Davis



Peter A. Hancock



Jay G. Pollack



Shameem Hameed



Thomas K. Ferris



Eduardo Salas



William R. Howse



Najmedin Mesbkati

51st Annual Meeting Highlights

More than 1,380 attendees helped to make the HFES 51st Annual Meeting in a success. During the week, 10 workshops and 82 technical sessions highlighted research and applications in a wide range of areas, and the meeting was enhanced by four interactive sessions and more than 30 exhibits.

The Society is grateful for the hard work and contributions by the Host Committee (made up of members of the Potomac Chapter and the George Mason University Student Chapter), the technical group program chairs, and the Technical Program Committee.

Town Hall for HFES Leaders

On Monday, October 1, Waldemar Karwowski (now immediate past president) convened a Town Hall for Executive Council members, leaders of the five HFES domains, and committee chairs to brainstorm ideas that could contribute to the strategic direction of the Society in the coming years.

Working in groups by domain (Internal Affairs, Outreach, Scientific Publications, Meetings, and HFES Institute/Standards), Town Hall participants discussed a number of strategies and goals and shared their ideas. Guided by EC member Andy Imada, the entire group then identified primary and secondary goals. A widely shared vision emerged of HFES as the primary worldwide source for information, expertise, and resources.

Augmented Cognition International Conference

The 4th Augmented Cognition International (ACI) Conference, cochaired by Denise Nicholson and David Kobus, featured paper sessions on the foundations of augmented cognition, training and education, and future directions and posters on a range of topics. On Tuesday during the ACI Banquet and Showcase Demo Event, the ACI 2007 Foundations of Augmented Cognition awards were presented to Gwen Campbell, Martha Crosby, Marc Grootjen, Mike Russo, Ron Stevens, and Stephen Whitlow. Following Rear Admiral Lee Kollmorgen's invigorating keynote address, ACTG executive officers Denise Nicholson and Leah Reeves presented Dylan Schmorrow, the founder of the augmented cognition field, with the 2007 Leland S. Kollmorgen Spirit of Innovation Award. This award recognizes exceptional scientists and engineers who have made substantial and innovative contributions to the augmented cognition field.

Human Performance in Extreme Environments

The Society for Human Performance in Extreme Environments (HPÉE) held its 5th Annual Meeting on September 30–October 1. Thanks to a diverse collection of presentations and panel discussions, an engaged group of attendees, and the cooperation of HFES, the meeting was a great success. Papers covered topics such as gender differences in bone-conducted communication, alerting systems for soldiers, and ways to measure and improve the fitness of firefighters. Attendees also enjoyed invited addresses on simulation of lunar-surface operations, risk factors in cave diving, the growing area of space tourism, and panel discussions with experts on human activities in extreme and challenging settings.

HPEE thanks HFES for providing meeting space and advertising for this year's meeting and its continued support.

For more information about HPEE and the 2008 meeting, please visit www.hpee.org.

Opening Plenary Session

Keynote speaker Nancy Nord, acting chairman of the U.S. Consumer Product Safety Commission, emphasized the key role of human factors/ergonomics (HF/E) experts within the CPSC. After noting that the CPSC was one of the first federal agencies to hire HF/E professionals, she described a wide range of products in which HF/E analysis has been used to educate consumers about risk, including portable generators, all-terrain vehicles, smoke alarms, and children's jewelry. Such analyses have contributed to the formulation of explicit warnings that are understandable and lead to safe use of the products by their respective target populations. Nord asked for assistance from the HF/E community and encouraged attendees to conduct research on consumer interactions with products, provide feedback to the CPSC, and comment on proposed regulations.

In his presidential address, Waldemar Karwowski presented his vision for HFES and the HF/E field for the next 50 years, noting that the convergence of biotechnology, information technology, and nanotechnology will change the nature of human-system interactions. See his article in the September 2007 issue of the *HFES Bulletin* (pp. 2–3).

Closing Plenary Session

Khan M. Siddiqui, chief of imaging informatics and cardiac CT/MR imaging at the VA Maryland Health Care System in Baltimore, described how the task of examining radiological images and arriving at accurate diagnoses has become vastly more complex over the years because of the shift from analog to digital imaging. These changes have in turn led to problems in workstation design for radiologists. Siddiqui identified the HF/E problem areas in the old radiology lab and then played a video depicting, in a humorous way, how those issues were resolved in the design of a human-factored working environment.

Siddiqui's PowerPoint slides and a link to the video, "Digital Eye for the Analog Guy," are available at <http://www.slideshare.net/drkhan/siddiqui-2007-bfes-keynote>.

Student Mentoring Activities

A number of events aimed at meeting the information and mentoring needs of students were well received, including Student Career and Professional Development Day, Student Lounge events and presentations, and Brown Bag lunches.

Winners of iPhones and Meeting Registration

The following members have won prizes for recommending that nonmember colleagues attend the 51st Annual Meeting: iPhones go to Myrna Callison and Kathryn Dannecker, and Barry Beith and Riley Splittstoesser will receive complimentary general registration for the 2008 meeting in New York next year.

Thanks to Leah Reeves and Jason Kring for providing details regarding the ACI and HPEE conferences, respectively. ☉

Executive Council Meeting Report

The HFES Executive Council met in Baltimore, Maryland, on September 29–30, 2007. Following is a summary of the action items discussed at the meeting.

Awards

The Executive Council endorsed a recommendation by the Awards Committee to revise the eligibility requirements for the Alphonse Chapanis Best Student Paper Award. Beginning with the 2008 Annual Meeting, coauthored student papers will be considered as long as the primary work was carried out by a student who is the primary author. Applications by students must be accompanied by a letter from the faculty adviser or project leader documenting the contribution of the student.

Government Relations Committee

Council approved operating rules for the Government Relations Committee. This group, chaired by past HFES president William C. Howell, is responsible for collecting and managing information on developments in the public policy arena that are of interest to human factors/ergonomics and related fields. Also approved were guidelines for HFES involvement in government outreach.

Strategic Discussion

Members of Council devoted time to a strategic brainstorming session to identify strategies and goals that HFES might adopt in the future. The ideas generated during this session will be combined with ideas from the Town Hall meeting (see article on page 5) to be considered by a blue ribbon panel.

Technical Groups

Effective immediately, technical groups may distribute election ballots and newsletters in electronic form. TG members are encouraged to include an e-mail address in their HFES membership records to ensure that they receive these materials. Members who do not have an e-mail address will continue to receive printed ballots and newsletters.

The position of TG Webmaster was institutionalized by Council through revisions to the TG Operating Rules. All TGs are encouraged to elect or appoint a Webmaster and ensure that their Web sites are kept up-to-date.

2008 Estimated Budget

Estimated Income

Membership Dues	\$677,000
Member Services	72,550
Communications/Publications	640,070
Annual Meeting	309,035
Other Meetings	0
HFES Institute	33,500
Miscellaneous Income	30,750
Total Estimated Income	\$1,762,905

Estimated Expense

Member Services	\$ 68,350
Communications/Publications	444,710
Administrative	836,685
Committees	105,000
Officers.	43,000
Annual Meeting	90,000
Other Meetings	0
HFES Institute	51,175
Interorganizational	41,550
Total Estimated Expense	\$1,680,470
ESTIMATED SURPLUS.	\$ 82,435

MEMBERSHIP

Time to Renew!

HFES is grateful for your membership! Dues renewal statements have been mailed, and we look forward to continuing to serve you in 2008. We've recently added a new benefit to make your membership even more valuable: The HFES Digital Library-Archive will put at your fingertips back volumes of *Human Factors*, *Ergonomics in Design*, and *Annual Meeting Proceedings*.

Membership renewal is easy. Either fill out and return the renewal form, or renew online at <http://hfes.org>. All transactions are secure. Just log in with your username and password. (If you've misplaced this information, just e-mail the Member Services Department at membership@hfes.org.) In addition to renewing your membership, you can update your member record, join or renew your technical group memberships, change your delivery preference for *Human Factors*, and order publications at special member prices.

IMPORTANT: To ensure that your correct contact information appears in the *2008-2009 Directory and Yearbook* and to avoid the postage surcharge, you must renew by **January 31, 2008**.

We hope you'll continue your participation in HFES and encourage your colleagues to join.

CALENDAR

Announcement deadlines: First day of the month prior to the desired issue; for events or deadlines within the first three weeks of a month, send information at least two months in advance. Items are published according to space availability. The full Event Calendar is available at <http://hfes.org>.

★ **48th Annual Meeting of the Psychonomic Society**, November 15-18, 2007, at the Hyatt Regency Hotel, Long Beach, CA, Psychonomic Society Publications, <http://www.psychonomic.org/meet.htm>.

Agriculture Ergonomics Development Conference, November 25-29, 2007, at the Hotel Istana, Kuala Lumpur, Malaysia. International Ergonomics Association and International Commission on Occupational Health, <http://www.aedec2007.org>.

Work, Stress, and Health 2008: Healthy and Safe Work Through Research, Practice, and Partnerships, March 6-8, 2008, Omni Shoreham Hotel, Washington, D.C. American Psychological Association,

the National Institute for Occupational Safety and Health, and the Society for Occupational Health Psychology, <http://www.apa.org/pi/work/wsh.html>.

Third IASTED International Conference on Human-Computer Interaction, March 17-19, 2008, Innsbruck, Austria. The International Association of Science and Technology for Development (IASTED), <http://www.iasted.org/conferences/home-611.html>.

The Ergonomics Society Annual Conference, April 1-3, 2008, University of Nottingham, United Kingdom. Sue Hull, Conference Manager, s.hull@ergonomics.org.uk, <http://www.ergonomics.org.uk/page.php?s=6&p=145>.

CWUAAT 2008: 4th Cambridge Workshop on Universal Access and Assistive Technology, April 13-16, 2008, Cambridge, United Kingdom. University of Cambridge Department of Engineering, <http://rehab-www.eng.cam.ac.uk/cwuaat/>.

2008 Quality Institute for Healthcare (QIHC), May 5-7, 2008, George R. Brown Convention Center, Houston, TX. Quality Institute for Healthcare, 1001 Avenida de las Americas Houston, Texas 77010, <http://www.qihc.asq.org>.

XVIII World Congress of Safety and Health at Work, June 29-July 2, 2008, COEX Convention Center, Seoul, Korea. Asia Pacific Occupational Safety and Health Organization, <http://www.aposho.org/index.jsp>.

★ Indicates new listing

PEOPLE

Nancy S. Anderson, HFES Fellow, died at her residence in Chinoteague, Virginia, on September 29, 2007. She was 77. She is survived by her companion of 56 years, Margo Bloxom.

Anderson received her B.A. from the University of Colorado in Boulder, majoring in mathematics. From there she went on to earn her Ph.D. in psychology from Ohio State University, specializing in research design, data analysis, and statistical methods.

After a brief stint at IBM, Anderson joined the Psychology Department at the University of Maryland, College Park, where she remained for 36 years. She retired as professor emerita in 1996.

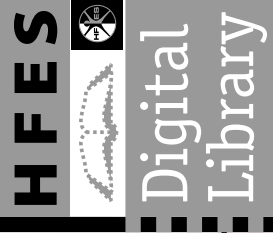
Anderson was a member of the American Psychological Association (APA) and served as secretary-treasurer of the APA's Division of Experimental Psychology, consulting editor of the *Journal of Experimental Psychology*, and a representative to the APA Council. She also served as president of the Division of Applied Experimental Psychology and was one of the founders of Division 35 for the psychology of women, serving as associate editor of the *Psychology of Women Quarterly* for many years.

Following her retirement from the University of Maryland in 1996, she turned her energy to volunteer work, spending many hours at the Chincoteague National Wildlife Refuge and the Chinoteague Island Library.

Memorial donations may be made to the Chinoteague Island Library for its building expansion fund, c/o Linda Ryan, 4077 Main St., Chincoteague Island, VA 23336.

- Thomas S. Wallsten

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FLASH!

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The HFES Selection Committee invites applications for Fellows and Honorary Fellows to be elected for 2008. Applications must be received in the HFES Central Office no later than February 1, 2008. To download the complete application package, go to <http://www.hfes.org/web/Awards&Fellows/fellows.html>.



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