Announcing the Grand Reopening of the Ergonomics in Design Web Site
By Marc Resnick, Social Media Editor, and Keith Bujak, Social Media Manager, Ergonomics in Design

It is with excitement and anticipation that we announce the official relaunch of the Ergonomics in Design Web site. Over the past few months, we have been posting concise yet thought-provoking articles and commentaries Monday through Thursday at http://ergonomicsindesign.com. Each post discusses new research findings or current events in HF/E with topics spanning the technical groups and links back to the source material.

Despite no official announcement until now, more than 1,500 people have visited the site since April. The site has quickly found its way to social media, with nearly 800 visitors coming to us through LinkedIn, Facebook, and Twitter. More than 40% of our audience is international, with people visiting from Brazil, Sweden, India, Australia, and many other countries. The responsive theme works well on both desktop and mobile platforms, allowing easy access from just about anywhere.

The purpose of this relaunch announcement is to invite each of you to visit the site and take a look. We think you will find many very interesting topics. Some of the more popular topics include the application of user-centered design, new findings about how people direct their visual attention, and the role of Type I and Type II errors in the design of everyday objects. We are striving to cover an array of HF/E subject areas and expect there is something of interest for everyone.

We don’t intend to provide the answers; we want to engage you in conversation in the comments sections for each article to see what you think. Knowing the HFES membership, we have a feeling that many of you will have great contributions to make, and we can all learn from each other. This informal conversation is a great opportunity to learn about some areas of HF/E that might not concern the main part of your work.

We are very excited to see how this conversation develops. We don’t really know what to expect, and we are sure that you will surprise us anyway. Head over to http://ergonomicsindesign.com, scan through the topics, and start talking. See you there.

Ergonomics in Design Seeks Papers on Combating the Sedentary Workplace: Challenges and Opportunities for Office Ergonomics
By Jack Dennerlein, Ergonomics in Design Special Issue Editor

A special issue of Ergonomics in Design (EID) is planned on HF/E solutions to combat sedentary behavior in the workplace. Article contributions are invited on any topic related to the physiology and epidemiology of sedentary workplaces and how HF/E principles and practices
have been applied, or are being applied, in efforts to address sedentary behavior in the workplace. Articles should describe how critical the science of HF/E has been for the project or research, provide useful information for practitioners, and show how the results of the project or research address the problem.

The special issue will highlight the wide range of areas in which HF/E specialists have contributed knowledge, expertise, and methods to combat sedentary work, including the physiology of prolonged sedentary activities; the epidemiology of adverse health outcomes and sedentary work; organizational practices to implement and sustain workplace interventions; effects on productivity, prevention of musculoskeletal disorder, and workstation design; integration into workplace wellness programs; and ergonomic guidelines for nonsitting workstations.

Submissions are due **December 15, 2014**. Long feature articles should be between 1,500 and 3,000 words, and shorter articles should be limited to between 1,000 and 1,500 words. Decision letters will be sent in February 2015, and revised manuscripts will be due April 1, 2015. The special issue is scheduled for publication in summer 2015.

The issue will be promoted not only to the HF/E community, including researchers and practitioners, but also to corporate wellness communities outside the HF/E field. Accepted articles will reach a large and diverse readership in an attractive, well-respected, peer-reviewed publication.

View the instructions for authors, publication policies, and sample articles, and then submit your article via the [EID online submission site](#).

Questions about submissions for this *EID* special issue can be directed to Special Issue Editor **Jack Dennerlein**.

### New Digital Book Highlights the Best of Forensic Human Factors/Ergonomics Research


The book gathers the highest-rated HFES Annual Meeting Proceedings papers and helpful overview chapters by top experts in their fields:

- **Chapter 1:** Slip, Trip, and Fall Issues in Forensic Human Factors/Ergonomics, Kenneth Nemire & H. Harvey Cohen
- **Chapter 2:** Transportation Issues in Forensic Human Factors/Ergonomics, Paul L. Olson & Rudolf G. Mortimer
- **Chapter 3:** Consumer Product Safety Issues in Forensic Human Factors/Ergonomics, Shelley Waters Deppa & Carol Pollack-Nelson
- **Chapter 4:** Warnings Issues in Forensic Human Factors/Ergonomics, David R. Lenorovitz & Edward W. Karnes
- **Chapter 5:** Workplace Issues in Forensic Human Factors/Ergonomics, Marc L. Resnick & Joseph Cohen
- **Chapter 6:** Practice Issues in Forensic Human Factors/Ergonomics, David A. Thompson & H. Harvey Cohen

“This publication commemorates almost 30 years of forensic HF/E knowledge and practice by organizing most of the research in one place,” said Nemire. “The guide is especially handy as a resource for better understanding how the science and practice of HF/E can augment the efforts of trial attorneys, forensic professionals, accident investigators, and those responsible for generating safety standards and regulations.”
The digital book facilitates discovery of the content through hyperlinks from in-text citations and references within each chapter directly to the more than 160 reproduced proceedings papers, which are contained in appendixes to each chapter. Links in the papers take the reader back to where they clicked the paper link.

“HF/E practitioner involvement in the legal system not only aids attorneys, judges, and juries during the litigation process but also may help to prevent similar incidents from occurring in the future,” said Nemire.

The book is free in PDF format on CD-ROM for HFES members with payment of a $5 shipping/handling fee ($7 outside U.S.); the cost for nonmembers is $200. To order, visit https://www.hfes.org/Publications/ProductDetail.aspx?ProductId=165.

**OPINION**

**Words Matter**

*By Robert R. Hoffman, Senior Research Scientist, Institute for Human and Machine Cognition, and Peter A. Hancock, Provost Distinguished Research Professor, University of Central Florida*

This article echoes a 1965 essay by Alphonse Chapanis, titled “Words, Words, Words,” published in *Human Factors*, Volume 7, Number 1. HF/E professes and espouses a foundation in scientific methods and values. As such, practitioners need to be especially mindful about terminology. Here, we comment on certain words and phrases that seem to be mandated by our subject matter and hence are common currency. Some of them, however, should be used more deliberatively, and others should perhaps be discarded entirely.

**System**

We routinely encounter research reports that use the word *system* in highly ambiguous ways. Typically, phrases go something like this:

*Complex sociotechnical workplaces are ones in which humans and machines have to deal with complex dynamics under conditions of stress and high risk...*

and continues:

*The system must have a human-centered interface that allows the user to...*

and:

*The system must be designed according to the compatibility principle...*

In this context of work analysis, the word *system* should be reserved to refer to the total human-machines-context assemblage. Everything else (including humans) constitutes a subsystem. If one means just the technology, as seems to be the intent in the second of the foregoing passages, then that is the word that should be used. Or use *machines*, which is also a perfectly good word. But some HF/E professionals seem to avoid such direct and concrete references. The danger enters with statements like the third one above. Is this intended to be a reference to the machine, some aspect of the machine (i.e., the display), or the total work system? This vogue—of using the word *system* in some places to refer to the work system and using the same word in other places to refer to bits of the technology—seems to be embedded in the rhetoric of current
HF/E. Such ambiguity does not speak well for our profession, the clarity of our expositions, or the future of our science.

Subjects

It is also perturbing that many HF/E professionals still use the antiquated word subjects to refer to their research participants, despite its banishment in most leading psychology journals. Use of this word reflects poorly on our sensitivity to the moral aspects of our discipline and our responsibility to society. A laboratory rat could barely be considered an observer (O), so the use of the word Observer in the early literature of experimental psychology gave way to the word Subject (S), as that could cover both animals whose consciousness was of no interest and animals whose consciousness was of interest, even though consciousness was relegated to the category of behavior.

But subject is also a matter of impolite and disrespectful reference. Having escaped the limitations of the traditional academic laboratory and acknowledged the limitations and pragmatic issues in field research, many HF/E professionals work with domain practitioners rather than college freshmen. One might well imagine the reaction of, say, a senior control room operator, a senior intelligence analyst, or a senior weather forecaster were they asked, “Would you be a subject in my experiment?”

Experts Versus Novices

Reports on cognitive field research often rely on a distinction between novices and experts. Typically, the distinction is used in such a way as to imply a certain threshold of proficiency, but more subtly it implies that the human race might be neatly bifurcated. In fact, there are multiple distinguishable levels and sublevels of proficiency (see Hoffman, 1998). Typical research reports lack sufficient detail concerning the participants, but it can be confidently asserted that many of the individuals called novices in HF/E research are not novices, and many of the individuals called experts are not experts. Lacking convincing evidence that a research participant is in fact an expert, one might refer to proficient workers or highly experienced workers or domain practitioners, which again are all perfectly good phrases.

SME

Although our main point here is essentially to recommend the outright banishment of acronyms and abbreviations, we single out SME (subject-matter expert) because, like subjects, it has moral implications. We are not the first to comment that SME sounds like a form of nasal discharge or the name of a Disney character.

Acronyms and abbreviations constitute a linguistic disease that has infected the rhetoric of many disciplines, including HF/E. There can be little doubt that the creation of clever acronyms has spread like a virus to the point that some are “macronyms”—that is, each of the letters is itself shorthand for some other acronym. A fun game to play is to keep a radar beam turned on for presenters who use more than one acronym in any single sentence. Then ask them what each letter of their acronyms means. Odds are in your favor that the presenter will not know or remember at least one of them.

Although there is debate on where acronyms originated, it seems reasonable to assert that they evolved to viral status when the military fielded the mimeograph machine and had to cram as much information as possible onto a single side of a piece of paper. In that context, the intent was to make communication efficient for people who shared a common language and goal and who used the jargon in all their work and close collaboration. Such is not the case today. For one
thing, we can afford to burn the electrons; we are no longer destined to devour rainforests in order to stock library shelves.

Acronyms often fly thick and fast in briefings, leaving outsiders hopelessly lost. Acronyms were never intended to communicate at all, let alone efficiently, to outsiders who do not share the lexicon of the insiders. It can be disrespectful to forget this.

Why do people continue to create more and more acronyms? One motivator is the need to self-promote. People reinvent wheels (ideas, methods, systems), and to make their work seem unique, they seem obliged to brand it with a clever acronym. Especially clever is the acronym that spells a word that is semantically related to the domain under study. The danger, of course, is that HF/E professionals come off sounding like salespeople rather than scientists. People also use acronyms whenever someone else uses acronyms. In particular, acronyms that are used unmindfully in funding program announcements get parroted in proposals, and on to the point where the meanings get forgotten. And assumptions become tacit.

**Methodology**

Methodology is the study or analysis of methods. We routinely encounter research reports that use the word methodology when the reference should be to the method. Experiments have methods, not methodologies. Experiments can be designed and conducted to test or evaluate methods. Those would be methodological experiments. But their methods are just that, methods. They are not methodologies.

**Metric**

There are differences between a measure, a measurement, a measurement scale, and a metric, and those differences are important to our empirical concepts of data analysis and interpretation (Hoffman, 2010). The word metric is used in many, if not all, announcements of funding programs, having been written sometimes by individuals apparently lacking a background in measurement theory. Everyone seems to want metrics, so we cannot really blame them. The word has spread outward from the source of the funding, in a way that again seems viral. We routinely encounter research reports, even ones penned by people who have taken statistics courses, that use the word metric when what they really mean is measure.

The response we have heard a few times is:

*Well, if people are now using the word metric to mean measure, that is acceptable as long as we all mean the same thing by the word. Besides, word meanings change all the time.*

This rejoinder is an abrogation of responsibility and has the effect of diluting the claim that HF/E is anchored in measurement theory and concepts. Besides, people do not all always mean the same thing by the word metric.

**Subjective Versus Objective Measures**

This distinction raises a terminological issue that gets at the philosophy of our science, but here too there is a moral consideration (Hancock, 2009).

What is the hardness of a substance? Surely this is a question for physicists, who are objective through and through. It turns out, there are a number of ways of measuring the hardness of a substance or an object, such as by dropping a steel ball onto it from a certain height and measuring its resultant deformation, or by scratching it with a diamond. It is by no means clear that all
the different ways of measuring hardness really address the same dimension. Hardness is, after all, a concept, conveniently fed to us as a single word by our language.

Selection of a method for measuring the hardness of a substance, for one or another engineering purpose, depends on human choice. “All measurement is subjective in that human acts and judgments are involved in every step of the process of measurement” (Muckler, 1977, p. 169; see also Collins, 1992). Conversely, even subjective measures have an objective aspect. The very same issue pertains to the understanding of the concept of time itself (Hancock, 2010).

It is not uncommon these days for reports of HF/E research to describe some finding accompanied by an apology in saying that the data are “merely” subjective. The authors thirst for additional funding to find some objective metrics. For example, researchers might express a preference for eye movements over verbal reports, as if eye movements can tell them what a person is attending to and verbal reports cannot. Or they might express a preference for brain measurements rather than subjective evaluations of mental effort.

The stance being taken here is that genuine science is built exclusively on objective evidence. This is methodolatry: the worship of particular methods or approaches, in its most perverse form. It has persisted since the abdication of the nominally subjective, early in the previous century by Knight Dunlap, John Watson, and others, in the vain hope that the “behavioral attitude”—the exclusive reliance on objective measures—would be psychology’s entry pass into the Hallowed Hall of Hard Science.

Naive objectivism devalues the theoretical utility and explanatory value of subjective reports by assuming, for instance, that just because subjective reports are not always valid or reliable, we should therefore throw out both the baby and bathwater and never bother to ask our participants any questions at all about what they believe or what they experienced while reasoning their way through our experimental challenges.

The irony here is picante. Take applied perception research, for instance. One is hard pressed to find a single hypothesis or theory about some phenomenon (e.g., attention) that was not derived from the task reflections of the experimenters, couched using metaphors such as mental effort, or the paying of attention, or focused attention, or the attentional bottleneck (Hoffman, Cochran, & Nead, 1990). So, the subjective impressions of us degree-laden scientists are believed to be valid science—naturally—but the reflections of our hapless participants are taboo? How quickly both psychology and HF/E seem to have forgotten the considerable discussions in the first part of the twentieth century about such crucial distinctions as those among introspection, task reflection, and systematic post-experimental retrospection.

We routinely encounter research reports in which the discussion chews hypotheses about the cause of some or another “behavioral” finding, postulating all sorts of notions about what the participants might have thought or how they might have reasoned or what they might have perceived. And yet there is not even the slightest hint that the researchers ever bothered to ask the participants any questions after the experiment was over. This too reflects a lingering hangover from behaviorism as well as the devaluation of the participant.

Conclusion

HF/E research, both academic and applied, must often be written in a way that relates to vogue terminology because of the strategies of grant-getting. Everyone self-promotes, but in some cases, our profession would benefit if we were a little more mindful in our use of jargon, even to the point of developing immunities to the latest buzz phrases that come down the expressway. Some modern diseases of rhetoric are a consequence of our collective failure to remember history. Most immediately, this failure results from a paucity of academic training that fully inoculates graduate students with a rich and deep knowledge of the history of our profession and the philosophy of science. Those who forget the past....
References


Robert R. Hoffman is senior research scientist at the Institute for Human and Machine Cognition. He is a Fulbright Scholar, a Fellow of HFES, and a senior member of the Association for the Advancement of Artificial Intelligence.

Peter A. Hancock is Provost Distinguished Research Professor and Pegasus Professor at the University of Central Florida, where he directs the Minds in Technology, Machines in Thought Laboratory. He is a past president and Fellow of HFES and a Fellow of IEA.

ANNUAL MEETING

Lindell to Present Arnold Small Lecture in Safety

Michael K. Lindell will deliver the 2014 Arnold M. Small Lecture in Safety on Wednesday, October 29, at the Hyatt Regency Chicago. Lindell is director of Texas A&M University’s Hazard Reduction & Recovery Center, which was founded in 1988. The center’s researchers focus on hazard analysis, emergency preparedness and response, disaster recovery, and hazard mitigation.

In his lecture, titled “The Protective Action Decision Model: Recent Research on Disaster Response,” Lindell will discuss the Protective Action Decision Model (PADM), a multistage model based on research findings on peo-
ple’s responses to environmental disasters. PADM integrates the processing of information derived from environmental and social cues with messages that social sources transmit through communication channels to those at risk. He will also describe how recent research has been expanded to address the timing and logistics of response and summarize findings from recent studies that demonstrate the model’s utility in cross-cultural settings.

Lindell received a PhD in social/quantitative psychology from the University of Colorado in 1975, with a specialty in disaster research. His experience in the field of emergency management spans more than 25 years, during which he has conducted a program of research on the processes by which individuals and organizations respond to natural and technological hazards. He has also provided technical assistance to government agencies, industry groups, and private corporations in developing emergency plans and procedures. Lindell has written extensively on emergency management and is the author of more than 60 technical reports, 60 journal articles and book chapters, and 5 books/monographs.

Much of his research, especially that supported by the National Science Foundation (NSF), has examined the processes by which affected populations respond to warnings of the imminent threat of a natural or technological hazard. His organizational research, also supported by NSF, has looked at the effects of disaster experience and the community planning process on the development of adaptive strategies for promoting emergency preparedness.

**Special Events in Chicago**

In addition to a diverse range of sessions and workshops, the 2014 Annual Meeting features a number of exciting events highlighting many aspects of the HF/E field and offering valuable networking opportunities.

**National Ergonomics Month Expo** – Monday, October 27, 4:45 to 6:15 p.m.
The NEM Expo will showcase outstanding projects involving schools, community service, and the media. Winners of the Best Action Plan Contest will be announced.

**National Research Council Board on Human-Systems Integration Panel: Safe Patient Handling** – Tuesday, October 28, 1:30 to 3:00 p.m.
Panelists Barbara Wanchisen, Nancy J. Cooke, Barbara Silverstein, William S. Marras, Pascale Carayon, Sara Czaja, Kate McPhaul, and David Rempel will discuss the application of human-systems integration to the issue of safe patient handling.

**Human Factors Prize Presentation** – Tuesday, October 28, 3:30 to 5:00 p.m.
During this session, Board of Referees Chair William S. Marras will present the $10,000 cash award to the recipient of the Human Factors Prize, who will discuss his or her paper on human-automation interaction/autonomy.

**12th Annual Stanley H. Caplan User-Centered Product Design Award Presentation** – Tuesday, October 28
More than 15 submissions were in competition for this year's award. The awardee will discuss his or her winning product, and the networking and business meeting of the Product Design Technical Group will follow the presentation.
Fellows Posters – Wednesday, October 29, 9:30 to 10:30 a.m.
Mingle and chat with HFES Fellows as they display work that has brought them distinction in the field.

Please visit https://www.hfes.org/Web/HFESMeetings/2014annualmeeting.html for updates and more information.

STANDARDS UPDATE

ISO/TC 159 Standards Update for August
By Daryle Gardner-Bonneau, Chair, U.S. TAG to ISO/TC159

The items presented in this article concern news relevant to ISO/TC 159 standards activities and include upcoming meetings, newly published standards, new standardization projects, and draft standards currently being balloted.

Except for newly published standards, titles of standards are abbreviated in this listing, but you can obtain the complete title for any standard by visiting the HFES Standards Web page and then clicking on the Subcommittee (SC) Technical Advisory Group (TAG) that is involved with the standard in which you’re interested. Clicking that link will display a graphic of the SC’s structure and a listing of all the projects and standards of that subcommittee. You can also purchase standards and search full titles and abstracts by going to the ANSI Store or the ISO Store and searching by the document’s number (e.g., ISO 24504).

The contacts whose e-mail addresses are provided below (i.e., Daryle Gardner-Bonneau, Robert Fox, and James Williams) welcome your inquiries and your participation in these activities.

The listings use the following ISO abbreviations:

TC = Technical Committee
SC = Subcommittee
WG = Working Group
CD = Committee Draft
DIS = Draft International Standard
FDIS = Final Draft International Standard
TR = Technical Report
NWIP = New Work Item Proposal
PAS = Publically Available Specification

New Projects
SC1 – revision of ISO 10075-1 – mental workload. Contact: JDNBonneau@charter.net.

SC1 – NWIP ISO 27500 – the human-centered organization: general principles – comments and vote on the CD due September 20, 2014. Contact: JDNBonneau@charter.net.

SC1 – NWIP ISO 27501 – the human-centered organization: management of ergonomic processes – comments and vote due September 20, 2014. Contact: JDNBonneau@charter.net.

SC3 – development of ISO 7250-3 – worldwide human body measurement design values. Contact: robert.r.fox@gm.com.

SC4 – ISO 9241-332 – autostereoscopic displays. Contact: ergojim@earthlink.net.
***SC4 – new work item proposal on accessibility of doors/handles of electronic home appliances – comments and votes due by September 9, 2014. Contact: ergojim@earthlink.net.

Draft Documents Released for Comment and Vote
SC4 – ISO DIS 9241-161 – user interface elements; due August 22, 2014. Contact: ergojim@earthlink.net.

SC4 and SC5 – ISO DIS 24505 – method of color combination taking into account age-related changes in color vision; due October 7, 2014. Contact: ergojim@earthlink.net or JDNBonneau@charter.net.

Upcoming Meetings

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<thead>
<tr>
<th>Standard/Group</th>
<th>Date</th>
<th>Location/Description</th>
<th>Contact</th>
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<tbody>
<tr>
<td>TC159/SC4/WG28</td>
<td>October</td>
<td>Gaithersburg, MD – continuing work on the Systems and Software Quality Requirements and Evaluation (SQUARE) standards series</td>
<td><a href="mailto:ergojim@earthlink.net">ergojim@earthlink.net</a></td>
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<tr>
<td>TC159/SC4/WG5</td>
<td>October 8–10</td>
<td>Venice, Italy – to resolve comments on ISO 9241-161 (user interface elements) and development of ISO 9241-112 (general guidance on presentation of information) and ISO 9241-125 (visual presentation of information)</td>
<td><a href="mailto:ergojim@earthlink.net">ergojim@earthlink.net</a></td>
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<tr>
<td>TC159/SC1/WG2</td>
<td>October 16–17</td>
<td>Berlin, Germany – to begin work on the revision of the ISO 10075 on mental workload</td>
<td><a href="mailto:JDNBonneau@charter.net">JDNBonneau@charter.net</a></td>
</tr>
<tr>
<td>TC159/SC1/WG5</td>
<td>October 30–31</td>
<td>Chicago, IL – to process comments on, and continue development of, ISO 27500 and 27501 (ergonomic process standards)</td>
<td><a href="mailto:JDNBonneau@charter.net">JDNBonneau@charter.net</a></td>
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Wanted: HFES Members with Interest in Agricultural Ergonomics

*By Robert Fox, Chair, U.S. TAG to ISO TC159/SC3*

The International Standards Organization (ISO) uses technical experts worldwide to create globally relevant, high-quality standards. As part of ISO’s long-term goals, the standards work has a heightened focus on the needs of developing countries.

One key area of interest is agricultural work, and the United States has been asked to provide experts on ergonomics applied to agriculture. Specifically, the working group on manual handling has been tasked with investigating the extension of the ISO 11228 standards to agricul-
The emphasis will be on manual physical work in agriculture, although interaction with agricultural machinery may also be addressed. The current standards in the series are as follows:

- ISO 11228-3:2007 – *Ergonomics – Manual handling – Part 3: Handling of low loads at high frequency* (directed at upper extremity repetitive motion); and

The U.S. expert panel made extensive comments on these standards as they were developed and periodically reviewed.

To address the need for the expanded focus in this series of standards, I encourage HFES members with an interest and/or background in agricultural ergonomics and/or ergonomics in developing countries to join the U.S. expert panel. Contact me at robert.r.fox@gm.com for details on the proposed projects to date. The majority of the work will be conducted through e-mail, although the entire working group typically will meet two or three per year, usually in Europe. (Any travel will likely be self-funded.)

**Other Ergonomics Standards Work**

The *Bulletin* regularly carries articles about the work of HFES members on the various subcommittees of the ISO Technical Committee (TC) 159 on ergonomics. Since 2006, I have been privileged to serve as the chair of the U.S. Technical Advisory Group (TAG) to ISO Subcommittee (SC) 3 for anthropometry and biomechanics. This TAG provides U.S. experts to SC3 working groups WG1 (anthropometry) and WG4 (manual handling). These working groups have produced a variety of standards and technical reports on anthropometry and the physical ergonomics of manual material handling. Please see the details on all of the ISO TC 159 subcommittees and their standards work at https://www.hfes.org/web/Standards/standardsISO.html.

**PUBLIC POLICY MATTERS**

**Update on Federal and Congressional Activities**

*By Lewis-Burke Associates LLC*

**HFES Submits Comments to Food and Drug Administration Safety and Innovation Act Health IT Report**

On July 7, HFES President Frank Durso, submitted comments on behalf of the Society on the Food and Drug Administration Safety and Innovation Act (FDASIA) Health Information Technology (Health IT) Report: Proposed Risk-Based Regulatory Framework. The comments expressed support for the FDA, the Office of the National Coordinator (ONC), and the Federal Communications Commission (FCC) proposed strategy to develop the appropriate health IT risk-based framework suitable for the promotion of innovation and patient safety. The comments also emphasized that additional oversight is necessary to sufficiently manage the safety issues outlined in the report.

In addition to providing targeted feedback to questions on the identification, development, and adoption of standards and best practices in health IT, the Society’s comments urged the in-
clusion of human factors considerations—specifically usability testing—at all stages in the process of developing health IT, from design through implementation. HFES encouraged the FDA, ONC, and FCC to consider these human factors principles in all focus areas of administrative health IT, health management health IT functions, and medical device health IT functions:

- Research findings from human factors, including human-systems integration, must be considered when developing standards and best practices.
- Human factors research findings must be considered in design, development, implementation, and integration to avoid adverse health consequences.
- Human factors must be considered with respect to quality management principles and processes to improve safety and reliability.

According to Section 618 of the FDASIA, Public Law 112-144, the FDA, along with the ONC and the FCC, were required to develop a report with a proposed strategy and recommendations on a risk-based regulatory framework for health IT and mobile medical applications. The law directed the agencies to develop a framework to simultaneously promote innovation, protect patient safety, and avoid regulatory duplication.

The FDASIA Health IT Report focused on health IT functionality, rather than explicit platforms or products, in an effort to acknowledge the need for flexibility as health IT evolves. To the Society’s disappointment, the agencies recommended no new or additional FDA oversight but, rather, ONC-coordinated interactions with the private sector to encourage industry-led voluntary reporting on the usability of health IT functions and platforms.

In conjunction with the release of the report in April, the FDA issued a notice for a request for comments for stakeholders to further engage in the process. HFES responded to this notice and continues to engage with federal policy makers to urge the inclusion of human factors considerations throughout the development, implementation, and regulatory processes for health IT.

**HFES Participates in Army Research Laboratory Summit on Federal Travel Restrictions**

On July 25, HFES participated in the Army Research Laboratory (ARL) Summit on the Impact of Federal Government Restrictions on Scientific and Technical Conference Attendance. The purpose of the summit was to establish a path forward to reduce the consequences of the travel and conference attendance policy for both federal agencies and societies. Summit participation included government agencies such as the National Institute of Standards and Technology (NIST), the Naval Research Laboratory (NRL), the National Institutes of Health (NIH), the FDA, the White House Office of Science and Technology Policy (OSTP). Also participating were representatives from the scientific and technical community, such as the American Association for the Advancement of Science (AAAS) and the Institute of Electrical and Electronics Engineers (IEEE).

HFES’s participation in the summit complements the Society’s efforts to contribute to the ongoing debate over federal travel restrictions and the impact such restrictions have on scientific progress. In January, HFES sent a letter to Senator Tom Carper (D-DE), chair of the Senate Homeland Security and Governmental Affairs Committee, expressing concern for the travel restrictions on federal agency officials and the unintended consequences on interactions among government, industry, and academia, including the restriction of scientific advancement. As the debate continues, HFES will weigh in on, and advocate for, preserving and promoting the interactions that enhance science and research.
Federal Funding Opportunities for Telemedicine, Telehealth, and Mobile Health Research

Lewis-Burke conducted a survey of federal funding opportunities for telemedicine, telehealth, and mobile health research to assist researchers and university faculty and leadership strategically position their projects, proposals, and organizations to engage in federal telehealth activities. The memorandum highlights opportunities of potential relevance, representing a range of potential backgrounds and applications, to universities and nonprofit research institutions. Federal funding agencies include the National Institute of Standards and Technology, the Department of Defense, the Department of Agriculture, the National Science Foundation, the Federal Communications Commission, and the Department of Health and Human Services.

Federal agencies are increasingly interested in serving several different populations—ranging from those in rural areas to underserved populations in urban areas to soldiers in the field—through telemedicine, telehealth, and mobile health. With the implementation of the Affordable Care Act, many anticipate a shortage of providers relative to those seeking medical care and believe mobile health may provide a means to help meet this need. HFES members are encouraged to engage with federal agency program managers to discuss white papers and proposals and to emphasize the importance of human factors considerations in this space.

FY 2015 Appropriations Updates, Policy Updates, and Funding Opportunities

Below are links to Lewis-Burke’s reports on specific appropriations updates to provide a comprehensive analysis of the FY 2015 appropriations process, followed by other policy updates and funding opportunities relevant to HF/E.

FY 2015 Appropriations Updates:

- Full Senate Appropriations Committee Approves FY 2015 Defense Bill – July 18
- House of Representatives Passes Energy and Water Development Appropriations Bill – July 17
- House Appropriations Committee Marks Up and Approves Interior Bill – July 16

Policy Updates:

- Senate Committee on Veterans’ Affairs Holds Hearing on State of VA Healthcare – July 21
- House Science Subcommittee on Research and Technology Holds Hearing on Policies to Spur Innovative Medical Breakthroughs from Laboratories to Patients – July 18
- Senator McCaskill Releases Report on College Sexual Assault Survey – July 11

Funding Opportunities:

- NSF Releases Solicitation for Fifth PIRE Competition – July 22
- NASA Solicits Input for New Centennial Challenges Program Structure – July 22
- NIST Center of Excellence Solicitation Released in Disaster Resilience – July 9

Lewis-Burke Associates LLC, a leading Washington, D.C.-based government relations and consulting firm, represents the public policy interests of scientific societies and institutions of higher education. Lewis-Burke's staff of about 20 government relations professionals work to promote the federal research and policy goals of HFES and the HF/E community.
FPE Provides Mentoring and Technical Advice
By H. Harvey Cohen, Senior Partner, Error Analysis, Inc.

Roger is interested in conducting his thesis project in the area of industrial ergonomics and safety, but none of the faculty in his department has that specialty. He’d like to find someone who could serve on his thesis committee and advise him on technical issues.

Nicole has learned a great deal in her graduate courses in human factors, but she wants to see how these skills are put to use in an applied research setting. She’d like to find an internship working on real-world projects with HF/E experts.

Sarah is thrilled to be working at her new job as an ergonomist in a large company, but she’s the only person with this background in her division. She’s been asked to provide standards related to a materials-handling process, and she’d like to talk with an expert in this area to review her approach.

Miguel is an ergonomist and safety specialist working for an agriculture company in Central America. He needs help selecting specialized resources and models that he wants to use to assess a potential ergonomics hazard.

These are some situations for which a relationship with a mentor or an adviser who is active in the profession would be a tremendous benefit. However, students and young professionals rarely have networks of experts whom they could contact for help.

As part of its mission to provide leadership in growing the profession, the Foundation for Professional Ergonomics (FPE) facilitates mentoring of students and young professionals in the practice of ergonomics. FPE’s mentoring program focuses on fostering professionalism and practice in HF/E and does not address preparations for certification or exploration of career options. Mentoring through FPE is an informal and flexible process designed to fit the specific needs requested. Often, advice is provided remotely (even internationally) through various electronic media and technology.

Are you an HF/E professional who is interested in helping others in your area of specialization? FPE and our profession could use your help in working as a mentor for students and young professionals.

If you are looking for a mentor, need some professional advice, or if you are interested in working as a mentor, contact FPE through Harvey Cohen at harvey@erroranalysis.com.

H. Harvey Cohen is board certified in both ergonomics and safety, and is a fellow of HFES and the Institute of Ergonomics & Human Factors in the United Kingdom. He is a founding member of the Board of Certification in Professional Ergonomics (BCPE) and is a member and/or scientific contributor to several standards committees, including ASTM F15 Consumer Products and ANSI Z535 dealing with safety signs, product warning labels, and collateral materials such as operator and user manuals.

2015 iConference Call for Submissions

The 10th Annual iConference is accepting submissions. The conference, an international gathering of scholars and researchers concerned with critical information issues in contemporary society, will take place March 24–27, 2015, in Newport Beach, California. It will include peer-
reviewed papers, posters, workshops, and sessions for interaction and engagement. A doctoral student colloquium, doctoral dissertation award, and student social media expo are also included. Submission deadlines are as follows:

- September 5, 2014: Papers
- September 12, 2014: Doctoral colloquium applications
- September 26, 2014: Workshops
- October 10, 2014: Posters and sessions for interaction and engagement
- October 14, 2014: Social Media Expo sponsoring-faculty letters-of-interest
- October 15, 2014: Doctoral Dissertation Award applications


**International Ergonomics Association Congress Call for Abstracts**

The 19th Triennial Congress of the International Ergonomics Association will be held August 9–14, 2015, at the Melbourne Convention & Exhibition Centre in Melbourne, Australia. The Human Factors and Ergonomics Society of Australia and the Human Factors and Ergonomics Society of New Zealand are jointly hosting the event and welcome abstract submissions through **October 3, 2015**. Contributions on all topics related to HF/E are invited, including practical, technical, empirical, and theoretical aspects. Case studies of the latest technology design for all domains of use and practice will be given particular attention. Please visit [http://IEA2015.org](http://IEA2015.org) for more information.

**“Putting Ergonomics Into Practice” Short Course**

Registration is now open for the “Putting Ergonomics Into Practice” short course at The Ohio State University in Columbus. The course takes place October 21–24 and offers a systematic approach to reducing injuries and improving work processes. Participants will learn important principles through lectures, case studies, in-class demonstrations, and hands-on exercises; understand the biomechanical and physiological bases of musculoskeletal disorders; use ergonomics assessment tools to objectively evaluate work processes; and more. More information can be found [here](http://isap.wright.edu).

**Aviation Psychology Symposium Call for Proposals**

The 18th International Symposium on Aviation Psychology will be held in Dayton, Ohio, May 4–7, 2015. Proposals are sought for posters, papers, symposia, and panels on any topic related to the field of aviation psychology, including human performance problems and opportunities within aviation systems, and design solutions that best utilize human capabilities for creating safe and efficient aviation systems. The submission deadline is **October 5**. Please visit [http://isap.wright.edu](http://isap.wright.edu) for more information.
**Featured Meeting**


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**September 2014**

Engineering and Product Design Educational Conference 2014, September 4–5, 2014, University of Twente, NL.

Automotive UI 2014: The 6th International Conference on Automotive User Interfaces and Interactive Vehicular Applications, September 17–19, 2014, Seattle, WA.

**October 2014**

American Biological Safety Association (ABSA) 57th Annual Biological Safety Conference, October 2–8, 2014, San Diego, CA.

32nd Annual SAE Brake Colloquium & Exhibition, October 5–8, 2014, Burlingame, CA.

International Society of Exposure Science (ISES) 24th Annual Meeting, October 12–16, 2014, Cincinnati, OH.


77th ASIS&T Annual Meeting, October 31–November 4, 2014, Seattle, WA.

**November 2014**

52nd Annual SAFE Symposium, November 3–5, 2014, Orlando, FL.


**December 2014**


**March 2015**


2015 iConference, March 24–27, 2015, Newport Beach, CA.

**May 2015**

The 18th International Symposium on Aviation Psychology, May 4–7, 2015, Dayton, OH.