

## An Exciting Time for the Human Factors/ Ergonomics Profession

By Mica R. Endsley, HFES President



I am very happy to be taking on the role of president of the Human Factors and Ergonomics Society for the upcoming year. Although I have been a member of HFES for more than 25 years, and involved in many different areas of the Society's activities, I can honestly say that I can think of no other time that is quite as exciting as now for our profession.

### Our Growing Society

First, I'm happy to report that unlike many other professional societies, HFES has actually been *growing* in membership over the past few years. This is thanks to the hard work of our exceptional staff and the many new programs that have been initiated. It is particularly impressive given the state of the economy, which can often hurt organizations such as ours.

Second, I am very excited about the numerous new services and activities that HFES has initiated. This includes adding the *Journal of Cognitive Engineering and Decision Making* to our portfolio, which is now a benefit for all HFES members, encouraging this rapidly growing area of our profession. *Ergonomics in Design* is also moving forward with an exciting new design to be unveiled in 2012 by *EID* Editor Carol Stuart-Buttle. The new design and direction aim to build the connections between the academic and practitioner portions of our membership. And *Human Factors*, the flagship journal of our profession, has added the *Human Factors Prize for Excellence in Human Factors/Ergonomics Research*, a wonderful opportunity to promote top-quality research in critical areas for our growing field.

On top of these improvements in our publications, in 2011, HFES initiated the new Webinar Series, taking advantage of new forms of communication to better serve our members with state-of-the-art lectures by leading researchers. In addition, and in keeping with our Society's Strategic Plan, the 2012 Symposium on Human Factors and Ergonomics in Health Care has been announced—the first of, we hope, many such symposia that HFES will undertake both to encourage critical growth areas in the field and to create better linkages with professionals in other organizations and domains who need to learn more about the value that our field can bring.

Local chapters serve many communities in and outside North America, and our student chapters have never been more active and vibrant, thanks to tireless efforts of Sandra Garrett, who has led the Student Affairs Committee. As Kim Vu takes the reigns from Sandra, I am reminded that our students truly represent the future leaders of HFES, and we will continue to find new ways to support this important portion of our community through opportunities for career training, placement, mentoring, and networking.

In keeping with this sentiment, our recently formed Early-Career Professionals Committee will be helping to serve an important need as our members transition from being students to beginning their careers in academia, industry, or government service. Look for new opportunities in the area of mentoring and training focused on the unique needs of this group.

### Improving Our Internal Operations

A great deal has changed in the 54 years since our Society was founded, including the topics of research, the challenges in practice, and, above all, the technologies that we interact with and

have available to support our work. In addition, we must change and evolve as an organization to better serve our members and to grow the profession to meet new challenges and opportunities in the marketplace.

For some time now, HFES has had a Strategic Plan to guide our decisions and devote our efforts and resources to the right things. Currently, we are working to extend the Strategic Plan to each of our five internal divisions, so that all of our committees and activities are focused not just on providing existing services but also on growing in ways that meet our strategic goals. This is the type of infrastructure that will allow HFES to move forward, with all the oars rowing in the same direction, and with clearly defined goals and objectives to aim for.

Over the next year, I and the rest of the Executive Council will be working with our division and committee chairs to strengthen the involvement of our volunteers and to reach out to involve many new members in HFES activities. If you have an area of interest and would like to volunteer your ideas and time to help with HFES initiatives, please contact me or the HFES staff and let us know. We will be sure to link you up with committees and programs that match your interests and capabilities.

As a further goal, I hope to improve our communications so that all members know more about the many ongoing and new activities and the great work that our volunteers are doing.

### **Achieving Outreach**

Outreach is a broad term that covers all our activities that are associated with getting information about the benefits of our profession out to business and government decision makers, prospective students, and the general public. This is an area that has been near and dear to my heart since the 1980s, when I worked on the Public Relations Committee with Keith Hansen, for whom our O. Keith Hansen Outreach Award was named.

I think we can all agree that human factors/ergonomics is one of the most useful fields within science and engineering, but most people know little or nothing about it, even those who need it the most. Whether the project is in developing a new cockpit, a power plant, or a new medical device, our members often fight an uphill battle to inform the managers, clinicians, or engineers they interact with about the science, approaches, methodologies, and metrics that we can contribute to the project's success. A key focus for HFES is in meeting this need to communicate the value of human factors/ergonomics to the world.

The current economic and political environment poses significant challenges for our profession. As national and local governments in the United States search for ways to cut costs, ergonomics regulations have become the target of proposed cutbacks at the state level by those who assume that all regulations add costs and should thus be eliminated. At the national level, many agencies that support HF/E-related research can find themselves the target of proposed budget cutbacks. And companies concerned about their bottom line may question the value that HF/E programs provide.

Although solving the budgetary challenges facing the United States will not be easy, a key challenge for HFES over the next year will be to proactively and repeatedly explain the value of human factors/ergonomics programs as an input to that debate. We do this not to boost our profession but because we truly know the value that our efforts bring to improving the lives, health, and safety of so many people, which in turn contributes value far exceeding its costs.

Periodically we are faced with numerous opportunities to present our case to decision makers who must make tough decisions about how to allocate resources. I believe these efforts would be much enhanced by the ability to share measurable and tangible successes of the value that HF/E activities provide. To support this effort, I invite you all to share your stories of these successes ([mica@satechnologies.com](mailto:mica@satechnologies.com)). As our Past President Hal Hendrick once said, "Good ergonomics is good economics." This is a point we need to keep making with the powers that be, and we need good data and good examples to support this effort that are kept fresh and relevant. We cannot expect others to understand the value that HF/E contributes to actually reducing the many costs that face society unless we can clearly articulate this position to them. So please help contribute to this effort, providing as much tangible and measurable detail as you can.

In addition to working to extend our outreach activities to meet this vital need to provide input to the national discourse, HFES will continue our work with other scientific associations, such

as the American Association for Engineering Societies, which is reviewing undergraduate engineering curricula; and the National Patient Safety Foundation, which is a cosponsor of our upcoming health-care symposium. Our long-standing membership in the Federation of Associations in Behavioral and Brain Sciences brings many opportunities to provide input on matters of importance to the profession on Capitol Hill and to key agencies related to our field.

Expanding into the new decade, HFES is also increasing its use of social media (Twitter, Linked-in, Facebook, and YouTube) as a way of improving communication among our members and the larger public. These media offer many new and exciting opportunities to connect with groups outside HFES, and we plan to leverage these capabilities to achieve our outreach goals. Supporting this effort, we now have staff members who can focus on communicating our messages more effectively and consistently, providing key resources that have been lacking in the past.

This is quite a long list of accomplishments, activities, and initiatives for the new year. As I said at the start, it's never been a better time to be a member of HFES, and I'm really looking forward to working with you all in achieving our common goals for the human factors/ergonomics profession.

## ANNUAL MEETING

# 2011 HFES Fellows and Awardees Honored in Las Vegas



Kaber



Lee



Moroney



Gorman



Cooke



Amazeen



Vink



Pollack-  
Nelson



Balk



Senders



Howell



Parsons

The Human Factors and Ergonomics Society elected three Fellows and presented several awards on September 20, 2011, during the Opening Plenary Session of the 55th Annual Meeting in Las Vegas, Nevada.

Newly elected Fellows are David B. Kaber, Professor, Industrial and Systems Engineering, North Carolina State University; John D. Lee, Professor, Industrial and Systems Engineering, University of Wisconsin-Madison; and William F. Moroney, Professor Emeritus, Department of Psychology, University of Dayton.

Recipients of the Jerome H. Ely *Human Factors* Article Award were Jamie C. Gorman, Texas Tech University, and Nancy J. Cooke and Polemnia G. Amazeen, Arizona State University, for their paper, "Training Adaptive Teams." (Volume 52, Number 4, August 2010). In this paper the authors researched the best training methods for team coordination in system development.

Peter Vink, head of the Department of Ergonomics and Innovation at TNO and a professor in the Department of Industrial Design at the Technical University of Delft, was honored with the

Hal W. Hendrick Distinguished International Colleague Award. Vink has been an international leader in ergonomics for decades, sharing his research findings and knowledge in many countries. He is especially recognized for his work on participatory ergonomics and for design principles to provide comfort in products, tools, and workplaces.

The Paul M. Fitts Education Award was presented to Michael J. Smith, Professor Emeritus in Industrial and System Engineering at the University of Wisconsin-Madison, in recognition of exceptional contributions to the education and training of human factors/ergonomics specialists. Smith served as an outstanding teacher and mentor during a distinguished career that spanned 23 years.

Carol Pollack-Nelson, Independent Safety Consulting in Rockville, Maryland, received the 2011 A. R. Lauer Safety Award in recognition of outstanding contributions to human factors/ergonomics in safety. Pollack-Nelson has worked for several years to improve consumer product safety by collaborating with all stakeholders, including consumers, manufacturers, distributors, and government organizations. Her tireless efforts have not only helped to improve consumer safety but have empowered the individual consumer to demand safe products by directly engaging government and manufacturers.

The recipient of the Alphonse Chapanis Best Student Paper Award is Stacy Balk, Department of Psychology, Clemson University, for “The (In)Accuracy of Estimations of Our Own Visual Acuity in the Presence of Glare.” The paper is coauthored by Richard Tyrrell from Clemson University.

The Jack A. Kraft Innovator Award was presented to John W. Senders for his long and distinguished career in human factors/ergonomics. Senders’s contributions have fostered a greater understanding of sampling theory, control theory, time-critical tasks, and human error. His innovations have led to human performance improvements in aviation, space exploration, ground and sea transportation, medical services, and the power industry.

William C. Howell, Arizona State University, received the Oliver Keith Hansen Outreach Award for service and excellence in outreach to the federal government and its agencies, and to professional organizations. Howell has spent his career promoting awareness of the HF/E profession by way of publications, books, and appearances before many congressional committees and individual Congress members and staff. Additionally, he was instrumental in the creation of the Human Factors Division within the U.S. Department of Homeland Security.

The Best *Ergonomics in Design* Article Award was presented to Beth Loring and Erin-Anne Lemieux for their paper, “User Research Improves Laparoscopic Instruments” (Volume 18, Number 1, Winter 2010). This case study describes the redesign of a laparoscopic instrument handle and shows the practical value of good user-centered practice and design.

HFES President Anthony D. Andre presented the Arnold M. Small President’s Distinguished Service Award to Stuart O. Parsons for his career-long contributions that have brought honor to the profession and the Society.

HFES congratulates all the newly elected Fellows and award recipients.

## Taking Your Chances in Vegas

By *Peter Hancock*



With lights flashing and bells ringing, we rolled into Vegas for the HFES 55th Annual Meeting at the Red Rock Resort. Vegas! Even the name is redolent of luck and gain, and we were not to be disappointed, at least as far professional advancement was concerned, for this year’s meeting was stacked with interest and appeal for all tastes. I attended the Human Performance in Extreme Environments (HP EE) conference before the start of HFES, which is a wonderful companion to our yearly professional meeting.

The Monday evening gala gave everyone a chance to meet friends both old and new, and the Opening Plenary Session on Tuesday morning provided magic in many forms. Deserving awardees and newly elected Fellows were presented with their merited accolades. Our president, Tony Andre, challenged us to improve in many dimensions. Insights awaited, and we were well

set to view good probabilistic science in the gambling capital of the world. The perennial and persistent challenge again reared its minacious head: how to choose between this and that, when this is so interesting and that is so important. One great blessing this year was that after figuring out the hotel layout, the usual challenge of finding rooms was a snap.

I attended the Tuesday morning sessions based on the proximity principle, since the augmented cognition session was right next door to “Control of Multiple Systems.” Multiplexing across papers was therefore possible, but the downside was that you didn’t get a seat. Charles Leech’s lecture provided a welcome change of pace from the standard formats. His presentation, which focused on semiotics, provided new and appreciated insights.

This year I had a unique experience in having not only my students but also my daughter attend the meeting, and collectively, we parsed out our coverage of sessions. Thus, although my present account is necessarily idiosyncratic, our group did get to cover a wide range of work presented. My first day finished with the informative and provocative panel, “What Do Human Factors Experts Have to Tell Juries?” which contained enlightening information on the role of the HF/E expert witness. As one who has occasionally served in this function, I am always interested in learning from our more experienced members and leaders, and this panel of Kenneth Laughery, Michael Wogalter, Kenneth Nemire, Alison Vredenburg, and Michael Kalsher certainly did not disappoint. I still have strong reservations about the adversarial role any expert witness is inevitably thrown into in our own legal system and did express such concerns in the lively Q&A session. Some panelists agreed with me, some others perhaps thought me crazy—this is why we confer.

Wednesday I shall always think of as Hal Hendrick Day. The session “Macroergonomics: Past, Present, and Future” was very special, as we all collectively laughed and cried over the loss of our valued friend and mentor. In the end, the smiles won over tears as Hal left us the best of himself and that best was, at its heart, so much fun. I hope you were there to hear Andy Imada “Talk Story” and to listen to the affectionate and laudatory talks by Brian Kleiner, Pascale Carayon, and Michelle Robertson. Time was allowed for reminiscences and eulogies from the collective participants. It is not only for his immediate colleagues that the spirit of Hal Hendrick lives on, and although we miss him, his luminary contribution continues to inspire. Written recollections of Hal have also recently appeared in a special supplementary issue of the *HFES Bulletin* (available at <http://www.hfes.org/web/HFESBulletin/Augspecial2011Main.html>).



*Hal Hendrick’s colleagues from the University of Southern California Institute of Safety and Systems Management gather to celebrate his life and contributions. From left: Peter A. Hancock, Andrew W. Imada, Michelle R. Robertson, Max Vercruyssen, Najmedin Meshkati, and Hal’s wife, Mary Hendrick.*

I had the honor and privilege to be part of the CEDM Pioneers Panel organized by David Kaber. This forum gave some senior members of our community a chance to recollect their own perspectives on the development of adaptive automation. Richard Jagacinski spoke on the utility of control theory, Christopher Wickens on the trade-offs involved in human interaction with automation, Raja Parasuraman on the history of adaptive automation, and Glen Wilson on how physiological measures can be derived and used as triggers in adaptive automation. Each com-

mentator provided a unique window on such issues and surveyed the past, present, and future of human-automation interaction.

Wednesday afternoon is traditionally given over to technical group business meetings, and I attended that of the Augmented Cognition TG, where Dylan Schmorrow gave an impressive and thoughtful appeal for our future integrated with neurocognition. Chris Berka then recounted the history and application of EEG. That evening, I was fortunate enough to be able to conclave with the HFES past presidents. For me, Wednesday concluded at the University of Central Florida student social at BJ's Brewhouse immediately across from the hotel. I had in-depth, detailed, and critical conversations with many of the UCF guests there.

By Thursday, my personal attentional resources (multiple and/or unitary) were beginning to be depleted. However, a poolside lunch with friends and colleagues allowed me to recall the morning's offerings, of which "Measures and Methods in Complex Environments" stood out. In one especially provocative presentation, I admired Catherine Burns for her exploration of ecologically meaningful multimodal interface design. Much may be harvested from these important conceptual explorations. Although experimentation is important, we have long neglected the theoretical foundations of our science, for which neglect we are beginning to pay a hefty price.

I had thought I had finished Thursday with the fine panel that Rudolf Mortimer had assembled to address the issue of unintended acceleration. Four panelists gave their unique perspectives, and a lively discussion ensued. But as I walked out of the room, I ran right into the Back Straight Boys in the poster area. Presentations were already being removed and rolled up when I was corralled by Haydee Cuevas to speak at length with four young researchers in their early teens. If our graduate students are our immediate coming colleagues, then the young men I encountered were our next generation, and my resounding response is "Bravo!" They had, along with their mentors, explored some very interesting dimensions of the ergonomics of posture. It was a wonderful sight and one I believe we should encourage in other high-school students.

My last night was spent at dinner with my own lab and a special guest. Friday proved to be a bonus. Although travel necessities meant I could not attend even the early sessions, Vegas had one last surprise for me. I had, of course, been losing due to (random?) chance all week to the Vegas casinos, but it was all balanced out at the airport, where I was picked out by the machine for a (random?) security screening. Why are machines always so darned tricky, and why are they always turning on their poor user? I'm sure we'll find the answers to that question next year in Boston—see you there.

## INSIDE HFES

# HFES Digital Library Now Exclusively on SAGE Journals Online

SAGE, the Society's publishing partner, has transferred the 16,000-plus articles in the HFES Digital Library to the SAGE Journals Online (SJO) platform. Members can now access everything published in *Human Factors*, *Ergonomics in Design*, *Annual Meeting Proceedings*, *Journal of Cognitive Engineering and Decision Making*, and *Reviews of Human Factors and Ergonomics* simply by logging in at [hfes.org](http://hfes.org).

The transfer of all back volumes was completed on September 15. This article serves as a reminder that the content will no longer be available via IngentaConnect. Log in at [hfes.org](http://hfes.org) with your member username and password and select the link for the journal of interest on the Welcome page.

### Enhanced Features

SJO is powered by Stanford University's HighWire platform, which offers features and functionality that not only keep readers in context as they conduct their research but also provide open access to full-text articles on HighWire that are linked to references in HFES content—at no extra charge:

- Single login with your membership ID at [hfes.org](http://hfes.org) as noted earlier.
- Expanded discipline features—Search and browse across 50+ disciplines.
- Abstract preview—Mouse-over entries available from tables of contents and search results provide pop-up previews of abstracts without leaving the page.
- Popular articles list—Most-viewed and most-cited articles lists are readily available from all pages within a journal site.
- Improved navigation—Redesigned main portal page provides targeted options for all types of users.
- Tag-along navigation—Content features follow alongside as you scroll down the article page.
- Pop-up references—Full citations pop up when you hover over reference numbers within the text of an article.
- Keyword pivot searches—Keywords are hyperlinked to enable quick searches of that term across all content in the journal.
- Feature hideaway—Author affiliations, related links, and other functions can be expanded or hidden from view; these preferences are retained throughout a session.

Questions about SAGE Journals Online may be directed to Communications Director Lois Smith ([lois@hfes.org](mailto:lois@hfes.org), 310/394-1811).

## Seeking Topic Proposals for Upcoming Reviews of *Human Factors and Ergonomics* Volume

David B. Kaber, editor of *Reviews* Volume 9, invites proposals from members and non-members for topic suggestions for this volume. The HFES Executive Council and Publications Committee have changed the format of each *Reviews* volume from collections of chapters on various topics to collections of chapters around a specific theme or area within human factors/ergonomics. The theme for Volume 9 is **Human Performance in Teleoperations**.

Nominate yourself to prepare a chapter on your suggested topic, or nominate others with expertise in the topic you suggest. Selection of chapter topics will be consistent with the *Reviews* series goal of producing in-depth reviews of work on timely topics of interest to professionals and students in human factors/ergonomics and related fields. Additional details about the Volume 9 theme is below.

Authors of approved topics will be asked to prepare a manuscript of about 18,000 words, inclusive of references. These individual chapters should contain a thorough review of this research and describe implications for theory, methodology, and practice. In particular, each chapter should emphasize the practical implications and applications of the research that is reviewed. Volume 9 is scheduled for publication in 2013.

The deadline for submitting topic proposals for Volume 9 is **October 31, 2011**, but earlier submissions are encouraged. Proposals should include the following information:

1. proposed chapter title (please be very specific);
2. proposed authors of the chapter (author participation should be confirmed);
3. a brief statement of why the topic is important and timely (about 500 words);
4. an assurance that there is a sufficient body of literature to justify a review, such as a rough outline with identification of key references to support major sections; and
5. avoidance of significant overlap with previously published chapters (go to [http://www.hfes.org/web/pubpages/reviews\\_fullchapterlist.html](http://www.hfes.org/web/pubpages/reviews_fullchapterlist.html) for the full list).

To discuss a proposed topic, to suggest chapter reviewers, or for additional information and contributor guidelines, please contact David Kaber at [dbkaber@ncsu.edu](mailto:dbkaber@ncsu.edu), 919/515-0312.

## **Volume 9 Theme: Human Performance in Teleoperations**

*By David B. Kaber*

Given the surge of research in human-robot interaction (HRI) within the past 5 years and the lack of a substantial review volume in the area in the last 10 years, there is need for a collection of new perspectives on teleoperations. As many working in the human-robot interaction (HRI) area know, the first edited volumes on teleoperations were published in the late 1980s.

Since the 1990s, few articles or handbook chapters have been published containing reviews of teleoperation systems and implications for users. Within the past 10 years, the scope of teleoperation applications has changed dramatically to encompass mobile ground and aerial vehicles as well as mobile operators. Contemporary systems now incorporate teams of operators working with teams of telerobots, typically in military applications. This has occurred, in large part, because of major advances in computer and robot technology, which enable machines to take on new roles in interacting with humans, such as being teammates or monitors of human work. On this basis the entire discipline of HRI has developed.

There is no sign that research on teleoperation, HRI, and related areas is slowing down, as indicated, for example, in recent special issues of the *Journal of Cognitive Engineering and Decision Making*. The National Science Foundation and other federal agencies have recently made major investments in future research in this area through the new National Robotics Initiative.

Today, HRI research spans a broad range of topics, and this new volume of *Reviews* on human performance in teleoperations will concentrate on remote interaction between humans and robots or control for achieving joint task performance. Applications in which humans use remote robots to interact with other humans (e.g., telemedicine) may also be covered. Topics in teleoperations research that the volume seeks to represent include, but are not limited to, the following:

- Adaptive autonomy/mixed-initiative in human-telerobot interaction
- Anthropomorphism in telerobot design for human interaction
- Cognitive task analysis applied to human-telerobot team performance
- Design of etiquette for human-telerobot interaction
- Human interfaces to telerobots: displays for teleoperation; controls for teleoperation (haptic and force-feedback systems)
- Human-telerobot team design/configuration
- Performance measures for human-telerobot team assessment
- Societal implications of advances in telerobot technology
- Telepresence in teleoperations
- Telerobotic applications: assistive (nursing or service) telerobots; telerobotic-assisted surgery; telerobots for telemedicine; teleoperation of unmanned ground vehicles/unmanned aerial vehicles
- Usability evaluation for teleoperators/telerobots
- Virtual reality and augmented reality interfaces for telerobot control

## **Invitation for Applications for HFES Fellow**

The Human Factors and Ergonomics Society's Fellows Selection Committee invites applications for Fellows to be elected in 2012. "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 that recognizes outstanding achievement, consistently superior professional performance, exceptional contributions, service to the Society, and other meritorious accomplishments. 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.

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 online (<http://www.hfes.org/web/Awards&Fellows/fellowapplication.html>) or by e-mail ([carlos@hfes.org](mailto:carlos@hfes.org)), fax (310/394-2410), or mail (P.O. Box 1369, Santa Monica, CA 90406-1369 USA). The completed application package (application form, recommendation form, candidate's vitae or resume, and supporting documentation) must be received by the Fellows Selection Committee at the HFES Central Office on or before **February 1, 2012**.

Applications approved by the Fellows Selection Committee, chaired by Waldemar Karwowski, 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 2012 Annual Meeting.

## **October 20 Webinar: Managing Human Error in Complex Systems**

Register today at <https://www2.gotomeeting.com/register/479296826> for the October 20 webinar, “**Managing Human Error in Complex Systems,**” presented by Scott A. Shappell, Clemson University. The webinar will be held at the following times:

9:00–10:30 a.m. Pacific  
10:00–11:30 a.m. Mountain  
11:00 a.m.–12:30 p.m. Central  
12:00 noon–1:30 p.m. Eastern  
5:00–6:30 p.m. GMT

HFES webinars are free for members. Recommend this webinar to your nonmember colleagues! Nonmember registration is available for \$125 at <http://hfes.org/web/EventDetails.aspx?EventID=13>.

### **About the Webinar**

Human error is associated with between 60% and 80% of all incidents and accidents in complex, high-risk systems such as aviation, health care, mining, and the oil and nuclear power industries. Managing human error is therefore fundamental to maintaining the safety, viability, and profitability of any organization. Unfortunately, as pervasive as human error is, the percentage of accidents and incidents attributable to it has not changed appreciably in the last several decades.

However, the introduction of several human factors/ergonomics system safety tools has begun to reduce human error. One such tool, the Human Factors Analysis and Classification System (HFACS®), is a system-safety model that effectively bridges the gap between human error theory and applied human error analysis. It is a proven tool for identifying and analyzing human error in complex, high-risk systems. HFACS provides a clear understanding of the reasons errors occur so that effective intervention programs can be developed. Using humor and captivating stories, Scott Shappell will describe HFACS and explain how to turn errors into information, information into knowledge, and knowledge into effective error management solutions.

## About the Presenter

Scott Shappell is a professor of industrial engineering at Clemson University. Before joining the faculty at Clemson, he was Human Factors Research Branch manager at the Civil Aerospace Medical Institute. In addition, he has served for more than 16 years in the U.S. Navy as an aerospace experimental psychologist. Shappell has published or presented more than 200 papers, books, and presentations in the fields of accident investigation, system safety, spatial disorientation, sustained operations, and fatigue. He graduated Summa Cum Laude with honors in psychology and received a BS in psychology in 1983 from Wright State University, and received a PhD in neuroscience from the University of Texas Medical Branch in 1990.

## Spread the Word: Free *EID* Article on Applying HF Guidelines to PowerPoint Presentations

The latest issue of *Ergonomics in Design* (2011, Volume 19, Number 3), includes “Evidence-Based Human Factors Guidelines for PowerPoint Presentations” by Francis T. Durso and colleagues, which provides background and tips for creating effective PowerPoint slides. The article is free for nonmembers as well as members at <http://erg.sagepub.com/content/19/3/4.full.pdf+html>.

Members: To access other articles from this and past issues of *EID*, first log in at [hfes.org](http://hfes.org) with your member username and password.

## National Ergonomics Month Is Here!

By Joseph R. Keebler, *NEM Committee Cochair*



October is here, and that means it's National Ergonomics Month (NEM)—now in its ninth year! Have you participated in NEM events in the past? If not, there's no time like the present to get started.

Over the last nine years, NEM volunteers throughout the Society have focused on four specific audiences: the media, corporate and government leaders, educators, and students. If you have already conducted NEM activities in the past, or are planning an event for 2011, we applaud your commitment to human factors/ergonomics and to placing importance on the future of HF/E. If you haven't considered participating or developing your own NEM activities, we hope that you will be inspired this year to take the next step.

The slogan for NEM is “A Time for Teaching, Learning, Networking, Service, and Fun!” That encompasses quite a bit, but at the same time it leaves the door wide open for you to plan any type of event, in any location, with any type of audience that you want to reach to spread the word about the HF/E field.

Now that National Ergonomics Month is in full swing, I'd like to start off by thanking Raegan Hoeft for her devotion and hard work as NEM Committee chair these past few years. Great job, Raegan! Alan Hedge and I will serve as the new NEM Committee cochairs and hope to fill Raegan's shoes. We also have a new NEM puzzle to share with anyone who is interested. Please contact us for more information on these very entertaining and hard-to-solve NEM puzzles.

HFES President Mica Endsley has asked us to take a new approach to NEM this year. In addition to our current activities, we will extend our outreach efforts throughout the year to spread the word about the value of the HF/E field. Planning has begun to aid in outreach next year to the U.S. population in general, local communities, undergraduate programs, industry, and government to make sure these important audiences know how important HF/E is in the creation of safe and usable technology.

### Recap of 2011 NEM Activities

The NEM Expo at the HFES Annual Meeting in Las Vegas was a success. We had many good demonstrations and active participation from the university students who entered the NEM

Best Action Plan contest. To honor those who won, we provide some insight into the award winners' plans.

Congratulations once again to the HFES Georgia Tech Student Chapter! Copresidents Jonathan Schuett and John S. Burnett provided a fantastic action plan and brought fun materials to the NEM Expo in the form of radio-controlled cars with wrongly mapped remote controls. The cars were not only fun (and difficult) to drive but were a very interesting demonstration of why HF/E is so important in interface design. The Georgia Tech action plan, "Bringing Human Factors to the City: The Bad Design Atlanta Competition," demonstrates a unique and well-thought-out plan for disseminating HF/E knowledge in the city of Atlanta. The plan arose from a university-wide competition in which students will be directed to find something that is poorly designed and propose an HF/E redesign. Relevant materials will be provided to potential entrants, including examples of bad designs with suggested redesign improvements. A panel of expert judges that includes Wendy Rogers and Gregory Corso, as well as a committee of Georgia Tech students, will choose the winners.

Congratulations also go to Robert Turner for his NEM Action Plan, "Form or Function? Challenging Sullivan's Credo with a Day at the Racetrack." This plan aims to promote better understanding of the apparent conflict between Louis Sullivan's credo that "form follows function" and the HF/E credo that "function must follow form." The plan will consist of 3 components: A debate; a land, sea, and air "derby" competition; and an after-action review. Six students will debate whether form follows function or vice versa and poll audience members, who will vote electronically. In the product design/prototype/testing derby, land, sea, and air racers will compete in multiple tests. Each team will have a prerecorded video describing the form versus function argument in relation to their racer, and the racers will be judged along multiple criteria by the audience members. Finally, the after-action review will take the form of a question-answer session in which the audience will help to determine the derby winner.

We are very proud of the student winners. These excellent projects, developed from the NEM Best Action Plan contest, help to ensure that NEM will continue to push the boundaries of HF/E outreach.

My thanks to Raegan Hoefft for her assistance in the preparation of this article. Enjoy the rest of National Ergonomics Month!

## Member Milestones: Gary Herrin



Gary Dean Herrin died peacefully at his home in Ann Arbor, Michigan, on August 18, 2011, surrounded by his family. He was born on February 18, 1946, in Cincinnati, Ohio. Gary attended Ohio State University, where he received his BS, MS, and PhD in industrial engineering.

In 1973 Gary joined the faculty in the Department of Industrial and Operations Engineering at the University of Michigan (UM). He served as the first director for the university's Center for Ergonomics, which was formed in 1980.

Gary was a true engineering statistician. He enjoyed using his profound knowledge of statistical concepts to solve a variety of engineering problems. Early in his career at UM, he became nationally known for his papers showing how various manual exertions required of workers in a variety of industries caused serious and debilitating musculoskeletal injuries and illnesses. This led to his being asked by the National Institute for Occupational Safety and Health to develop a statistical method that could be used to guide safety and ergonomics programs in companies that were interested in preventing musculoskeletal injuries. A committee of experts working for NIOSH later sanctioned Gary's formula as the foundation for its widely circulated 1981 document, "A Work Practice Guideline for Manual Lifting." This document and Gary's risk prediction formula were quickly adopted by a number of professional safety organizations and became the basis for safe weightlifting regulations in several countries. For over a decade it was the most popular occupational health and safety document published by NIOSH.

In 1991 a second expert panel was sanctioned by NIOSH, and with minor adjustments and additions to Gary's formula, it supported the fundamental structure of his original work. To this day, the 1991 NIOSH lifting guide remains the most prevalent means to control manual-materials-handling overexertion injuries in companies around the world.

In his later years at UM, Gary devoted himself to providing a sound statistical basis for Six Sigma product quality programs. He developed an online teaching program to assist quality assurance personnel in companies that desired to learn more about the underlying statistical methods needed to improve their quality control programs.

Gary was not only a superb classroom teacher, having received the Teacher of the Year Award from the UM Society of Women Engineers in 2005, but he also was principal adviser on 20 PhD thesis committees and was a member of another 68 PhD thesis committees.

Gary is survived by his wife of 41 years, Michael Herrin; his three children, Jeff, Brandon, and Whitney Dowd; six grandchildren; his mother, Eleanor Herrin; sister, Debbie Coy; and brother, Greg Herrin.

—Don B. Chaffin

## Member Milestones: Homeland Security Recognizes the Value of Human-Systems Integration

On July 21, 2011, Department of Homeland Security (DHS) Under Secretary for Science and Technology (S&T) Tara O'Toole presented the 2011 Under Secretary's Award for Program Support to the Human Systems Integration Team in the Human Factors/Behavioral Sciences Division of S&T. The award citation reads as follows:

The Human Systems Integration (HSI) Team of Dr. Janae Lockett-Reynolds, Mr. Darren Wilson, and Dr. Thomas B. Malone (Carlow International Inc.) is recognized for institutionalizing HSI principles, processes and best practices across the Department of Homeland Security (DHS) components. The HSI Team positioned the S&T Directorate at the national and international forefront in addressing human performance challenges to improve total system performance and reduce lifecycle costs. Their efforts have resolved vulnerabilities and deficiencies in systems and technologies that DHS has developed and deployed.

The HSI Team also includes Mary Malone, CEO of Carlow International; Larry Avery and Bonnie Novak of BMT Designers and Planners Inc.; Katherine Muse Duma of Booz Allen Hamilton; Robert Bost of Serco, Inc.; and Michael Boyce of the DHS Human Factors/Behavioral Sciences Division. This team has incorporated HSI requirements into the DHS Acquisition Management Directive (policy), developed a standard HSI process and associated HSI best practices and metrics that are aligned with the phases of the Systems Engineering Life Cycle, and provided direct support for DHS programs as a mechanism to demonstrate the process and best practices. The HSI Team also manages a DHS-wide HSI Community of Practice and is developing an HSI design standard for DHS applications.

*The DHS HSI Team, from left: Thomas Malone, Bonnie Novak, Katherine Muse Duma, Larry Avery, Janae Lockett-Reynolds, Robert Bost, Darren Wilson, and (center front) Michael Boyce.*



*October 2011*

ACE 42th Annual Conference Ergonomics & Performance: Health, Safety and Beyond, October 18–20, London, ON, Canada, <http://www.ace-ergocanada.ca/index.php?command=buildBlock&contentid=850>.

HFES Europe Chapter Annual Meeting 2011, October 19–21, Weetwood Hall, Leeds, UK, <http://conference.hfes-europe.org>.

SAFE Association 49th Annual Symposium, October 24–26, Grand Sierra Resort & Casino, Reno, NV, <http://safeassociation.com>.

*November 2011*

Defence Human Sciences Symposium, November 16–17, Melbourne, Australia, <http://www.dsto.defence.gov.au/dhss2011/>.

AutomotiveUI'11 – 3rd International Conference on Automotive User Interfaces and Interactive Vehicular Applications, November 29–December 2, Salzburg, Austria, <http://www.auto-ui.org>.

*January 2012*

ACHI 2012: The Fifth International Conference on Advances in Computer-Human Interactions, January 30–February 4, Valencia, Spain, <http://www.iaria.org/conferences2012/ACHI12.html>.

*March*

**[2012 Symposium on Human Factors and Ergonomics in Health Care: Bridging the Gap](#)**, March 12–14, Marriott Baltimore Waterfront Hotel, Baltimore, MD. *Proposal due date extended to October 31, 2011.*

*April*

2012 International Conference on Social Computing, Behavioral-Cultural Modeling, & Prediction (SBP12), April 3–5, U. of Maryland, College Park, MD, <http://www.umiacs.umd.edu/conferences/sbp2012/>. Paper due date: *November 4, 2011.*

EHF2012, April 16–19, Blackpool, UK, <http://www.ehf2012.org.uk>. Paper due date: *October 10, 2011.*

ISCRAM 2012: The 9th International Conference on Information Systems for Crisis Response Management, April 22–25, Vancouver, Canada, <http://www.iscram2012.org/>. Paper due date: *November 15, 2011.*

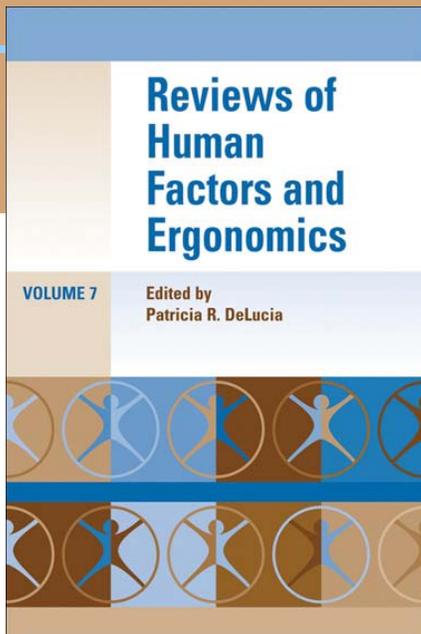
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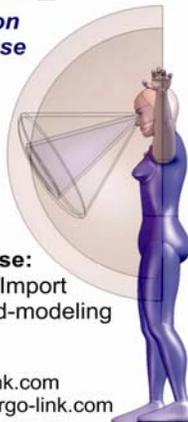
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The Department of Psychological and Brain Sciences at the University of Louisville invites applications for a full-time, tenure-track position at the Assistant Professor level beginning July 1, 2012. We are seeking to expand our faculty in the Vision and Hearing Sciences training program. While we are particularly interested in applicants with research interests in the hearing sciences, we also encourage those with research programs in the visual sciences to apply. Those conducting research with an applied or translational component are especially welcome.

Successful candidates will have completed their PhD by July 1, 2012 and are expected to contribute to undergraduate and graduate training and to maintain an excellent record of research productivity. Application and vita must be submitted electronically at [www.louisville.edu/jobs](http://www.louisville.edu/jobs), using Job ID# 27499. Additional supporting materials including CV, teaching and research statements, representative reprints and preprints, and 3 letters should be sent directly to: Search Committee, Attention: Ms. Leisa Hillman, Department of Psychological and Brain Sciences, University of Louisville, Louisville, KY 40292. Review of applications will begin Nov 15, 2011.

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## Bulletin



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