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## HF/E in the Post-9/11, Post-Katrina World: A Personal View

*By Marvin J. Dainoff, HFES President*

What a challenging time! What an important time to be a human factors/ergonomics (HF/E) professional.

In the post-9/11, post-Katrina world, society faces complex issues in which advanced technology will play a major role. It is impossible to overestimate the importance of our field and the possible contributions of HF/E professionals as “advocates for the user” in this increasingly technological age.

In complex systems, failures of coordination can result in catastrophic failures. We have just had a horrible example with Hurricane Katrina. *As HF/E professionals, we know something about coordination in complex systems.*

Business and commerce are becoming more technology dependent; computers, e-mail, the Internet, and cell phones are staples of daily life. Yet implementation of technology is often clumsy at best. *We know a lot about user-friendly technology.*

Military operations have been transformed by technology. Laptops have become as important on the battlefield as guns. *We have a long history of involvement in enhancing military technology.*

Medical systems are on the cusp of a similar transformation. Widespread computerization of medical records is about to happen. *We have something to contribute here and have been asked for help.*

And the list goes on...

We can celebrate our successes in our upcoming 50th anniversary year. Thanks to our members, aircraft cockpits have been improved. Some work processes are safer and more efficient. Ergonomic workplace furniture, input devices, and display monitors are available. Usability has become an important issue in equipment and software design. We have documented evidence for our capability to save lives, reduce injuries, and increase productivity.

Yet most people don’t really know what human factors and ergonomics is. They may have heard about ergonomic chairs or keyboards but have little awareness of the incredible breadth and diversity of our discipline. Simply put, we don’t have the respect or the name recognition we deserve.

Solving this problem is the task of every one of us. My predecessors on Executive Council have made a great start, and I will

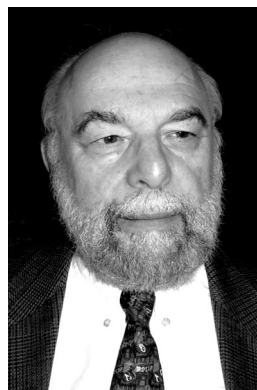
try to keep the momentum going. Last year, President Wendy Rogers initiated a Patient Safety Science Forum, the first of a series that HFES will cosponsor with the Federation of Behavioral, Psychological, and Cognitive Sciences. Science Forums, which are held in Washington, D.C., allow scientific officers from federal agencies, university researchers, and representatives from science advocacy groups to examine and discuss the possible resolution of research-related issues and management problems. Appropriately, the next Science Forum, to be held in November and also organized by Wendy, deals with the topic of human factors and homeland security. Reinforcing these efforts, Bill Howell has agreed to serve as chair of the Advocacy/Government Relations Committee and will help us coordinate our advocacy efforts in a more systematic fashion.

At the grass-roots level, National Ergonomics Month (NEM) participants continue to focus on promoting HF/E to corporate executives, students, and the general public one step at a time. This truly “bottom-up” effort has been led by Ron Shapiro and will be taken over by Haydee Cuevas. NEM occurs every October, and I strongly urge each HFES member to celebrate NEM by telling someone about

HF/E. Visit the NEM Web site, <http://hfsnem.org/>. Also at the grass-roots level, a media outreach effort has begun with our involvement in a program called Discoveries and Breakthroughs Inside Science. This effort is designed to provide television programming to local news stations about science, and our involvement will ensure that human factors/ergonomics activities are included.

So we on the Executive Council level will try to provide leadership. However, each one of us, as a member of HFES, must reflect on our own individual contributions. Getting our potential users and customers to understand and respect the depth and breadth of our contributions is something that each of us must do.

**Bridging the Gap**  
Here are some of my own reflections on why we are not, as a Society and a discipline, where we should be.



*Marvin Dainoff*

*continued on page 2*

## *HFE in the Post-9/11, Post-Katrina World...*

(continued from page 1)

Paradoxically, the source of our strength as a profession is also a source of internal concern within HFES: It is the challenge of simultaneously serving as a scientific society and as a practice-oriented professional organization. This results in an inherent tension between researchers and practitioners, which plays itself out in day-to-day negotiations over issues such as standards for review of journal articles and conference presentations and allocation of resources during the annual meeting.

Yet in my own experience over the last 30 years, laboratory research and the communication skills developed in teaching students (from first-year undergraduates through doctoral candidates) have made me a better consultant, and real-world experiences from consulting have enhanced my teaching and focused my research. This leads me to believe that we, as an organization, should embrace and build upon this researcher-practitioner tension. It makes us stronger, bringing the critical analysis of the scientist and the practical constraint-oriented judgment and experience of the practitioner into a mutually beneficial relationship.

Let me emphasize that this is not easy. Not everyone has the temperament to switch between lab and field. However, because of the nature of HF/E, HF/E researchers don't isolate themselves in their labs and avoid extended and continuous dialogue with those dealing with operational problems in the real world. HF/E practitioners don't rely on the same repertoire of techniques; instead, they realize that interventions need to have a scientific basis. Practitioners need to know the implications of recent research for practice and need to push the researchers to improve the science underlying such methods. As HF/E professionals, we urgently need to figure out how to simultaneously have rigorous science and research-based practice.

A good beginning might be to ponder the words of Barry Beith, who, while serving as president of HFES, wrote

*We would do better to define ourselves by looking at the core of our discipline, where we discover the two knowledge bases that allow us to work and contribute to virtually any domain and to improve virtually any application. Those knowledge bases are (a) knowledge of human beings relating to such concepts as characteristics, capabilities, limitations, behaviors, cognition, perception, emotion, motivation, and performance; and (b) knowledge about scientific and engineering methods, including experimental designs, measurement, data analysis and interpretation, engi-*

*neering tools and techniques, simulation and prototyping, and the ability to translate such data in order to affect (and improve) engineering and design. The combination of these two knowledge bases allows us to bring a unique perspective and set of skills to enhance the performance and quality of life in an almost boundless set of domains and applications (HFES Bulletin, November 2003, pp. 2-3, <http://www.hfes.org/Web/bulletinarchive.html>).*

The potential of HFES is to serve as a focal point for realizing the contributions of HF/E to health, satisfaction, productivity, and security. We all need to devote our energies to enhancing this potential. It won't be easy, but we dare not fail. ☒

## FELLOWS

## Invitation for Applications for Fellow

The Human Factors and Ergonomics Society's Fellows Selection Committee invites applications for Fellows and Honorary Fellows of the Society to be elected in 2006. 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 (formerly nomination) on behalf of another.

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

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

The applicants must solicit recommendations from three other voting Members who are willing to provide written recommendations in support of the candidate. The meritorious contributions of the applicant must be detailed in the application form and must be supported by evidentiary documentation and included with the package.

The Fellow Application Package, including instructions, nomination and recommendation forms, and supporting information, may be obtained from HFES, P.O. Box 1369, Santa Monica, CA 90406-1369, [lynn@hfes.org](mailto:lynn@hfes.org). The completed application package (application form, recommendation form, candidate's vitae or résumé, and supporting documentation) must be received by the Fellows Selection Committee at the HFES central office on or before *February 1, 2006*. Applications approved by at least two-thirds of the Fellows Selection Committee and a majority of the full Executive Council will be recommended for approval to all Fellows by mail ballot. ☒



## Bulletin

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## National Ergonomics Month's Here!

By Haydee M. Cuevas, NEM Committee Cochair

October is National Ergonomics Month (NEM) – “A Time for Teaching, Learning, Networking, Service, and Fun!” Have you created an action plan to begin promoting NEM this month to your local community, government and corporate representatives, and the media? Need some ideas to inspire you? Below are brief summaries of the actions plans submitted by HFES student members for the NEM 2005 Best Action Plan Contest (winners will be announced in the November issue).

Hugo Bertolotti (California State University, Long Beach Chapter) proposes a “Human Factors Egg Dropping Contest.” This contest challenges students to apply human factors/ergonomics (HF/E) principles such as usability and efficiency to design an egg-dropping device that meets their customer’s listed requirements: small, lightweight, inexpensive, yet sturdy enough to protect its fragile contents from damage after repeated falls. Definitely an entertaining and informative approach to educating his university and local community about HF/E!


The HFES Student Chapter at the Georgia Institute of Technology proposes that “It’s Never Too Early” to learn about HF/E. This group’s action plan targets a wide range of students, including new computer science freshmen; high school students attending a mathematics, science, and technology conference; and elementary school students enrolled in the Georgia Tech K\*I\*D\*S Club. Activities include presentations on ineffective designs, a demonstration on redesigning a cockpit, and a hands-on project in which students design their own video game controllers. What a fun and educational approach to inspiring the next generation of HF/E professionals!

The HFES Student Chapter at the University of Central Florida proposes a campus-based, community-wide campaign to increase awareness of human factors/ergonomics. Activities include presenting an HF/E concepts/designs display at their campus library, sponsoring a campus-wide “Find It and Fix It” design competition, sponsoring a best graduate and undergraduate HF/E research proposal award, inviting students on a fieldtrip to AAA headquarters, staffing a booth at the Orlando Science Center, and creating and distributing the “2006 Famous Faces of Human Factors Calendar,” which spotlights the accomplishments of well-known HF/E professionals using popular movies (e.g., Raja Parasuraman in “2006: A Neuroergonomics Odyssey”).

The Virginia Tech Student Chapter proposes to educate members of that university and the surrounding community about how HF/E can benefit their everyday lives. Their action plan details many excellent outreach activities, including presentations to freshman engineering students on how universal and user-centered design principles can be incorporated into the traditional engineering design process; activities introducing high school students to HF/E as part of the Pre-College Initiative program, organized by the National Society of Black Engineers; giving an interactive presentation to middle school students participating in the Imagination summer camp, sponsored by the College of Engineering’s Center for the Enhancement of Engineering Diversity; and a series of activities for older adults and their caregivers to demonstrate

how HF/E-based technology can improve their lives through things like adjustable workstations, automatic pill dispensers, and lighted walking canes.

Tell the NEM Committee about your great NEM ideas and activities so that we may share this information with everyone. Send a note to Haydee Cuevas at haydee.cuevas@satechnologies.com. For more information and resources for your NEM action plan, visit <http://hfsnem.org/>. You may also e-mail us directly at neminfo@hfsnem.org with any questions related to NEM or for assistance with planning your NEM activities.

To order a copy of the “2006 Famous Faces of Human Factors Calendar,” contact Jennifer Ross, 407/687-4435, jmross@mail.ucf.edu. Profits from the sale of this calendar will be donated to the relief effort for Hurricane Katrina. Calendars are \$15 for student members, \$20 for HFES members, and \$25 for non-members. 

### STUDENT VIEWS

## Greetings and Salutations: Networking Advice for Students

By Michelle Harper-Sciarini

Networking is an important way for students to prepare themselves for a professional career. Although the word *networking* is defined as “to join,” the act of networking requires more than just belonging to a group. It entails meeting people and developing professional relationships with them. Professional relationships enable collaboration and the sharing of knowledge, which benefits present endeavors and future successes. Those who network have more resources at their disposal and increase their chances of hearing about opportunities, such as job openings and calls for proposals.

Networking not only contributes to individual success, it also contributes to the success of the human factors/ergonomics (HF/E) profession as a whole. In order for the HF/E scientific community to thrive, members must communicate with peers who share related interests.

Professional meetings and conferences facilitate the development of these professional relationships. Attending these events is an excellent way of networking with those who share your research interests; however, initiating conversations at these events can be daunting. I have felt intimidated on more than one occasion when I’ve met a senior researcher whose work I admire.

Fortunately, there are effective ways to lighten the burden of meeting new people at a meeting. Below are a few networking tactics that I hope you will find useful.

Simply introducing yourself and starting a conversation is the most direct way of meeting others, but at conferences, it can seem awkward or difficult. Presenting your research, attending social functions, and participating in professional activities may be a more natural way to make new connections.

Presenting your research is a sure way to get connected with people who share your interests. Two common formats are poster presentations and paper presentations, each of which provides a different interaction experience. Presenting papers enables you

*continued on next page*

to tell an audience about your work and allows others to recognize you as sharing their interests, which could lead to a conversation after the presentation. Poster presentations allow you to converse with people individually, which enables you to explore common research in more detail. Your decision as to which format to use may depend on the stage of your research or your comfort level with presenting to a large audience.

If you don't have a specific research project to present at a meeting, you could attend presentations and poster sessions and initiate conversations with like-minded presenters.

Social functions at meetings are designed to encourage networking. These include an opening event for all attendees, events that cater to those who share a specific research interest, and meetings specifically for students.

At these events, try introducing yourself, or ask someone of senior status to introduce you to others. I owe a debt of gratitude to a former professor who has always been happy to provide countless and invaluable introductions.

Participation in ongoing professional activities is another great way to network. Many of the activities held by the hosting society, association, or organization requires volunteers. By volunteering within a professional organization, you will connect with other volunteers as well as attendees at the organization's event. Volunteer opportunities include reviewing proposals, chairing or cochairing lecture and poster sessions, and being a student representative for the group.

A great way to obtain a volunteer position is through membership in one or more of the many technical groups, divisions, and societies. Members are informed of volunteer opportunities by newsletters, e-mails, and other communication formats. Also, you might ask fellow students who have volunteered in the past to provide you with their contacts.

Networking is important to your career and to our field. As I continue my journey through graduate school and beyond, I am confident that using these simple networking tools will help me to continue establishing professional relationships. I am sure they can help you, too.

*Michelle Harper-Sciarini is a fourth-year Ph.D. student at the University of Central Florida. She works as a research associate at the Team Performance Lab under the supervision of Florian Jentsch. Her research interests include knowledge elicitation, structural knowledge, and aviation training and assessment.* ☒

## SHORT COURSES

**Putting Ergonomics Into Practice**, October 25–28, 2005, Columbus, OH. Ohio State University Ergonomics Short Course, Institute for Ergonomics, 1971 Neil Ave., 210 Baker Systems, Columbus, OH 43210, 614/292-4565, fax 614/292-7852, ergonomics@osu.edu, <http://ergonomics.osu.edu/>.

**27th Annual Occupational Safety and Health Update**, December 8–9, 2005, Chapel Hill, NC. Occupational Safety and Health Education and Research Center, University of North Carolina, 3300 Hwy. 54 West, Chapel Hill, NC 27516-8264, 888/235-3320, fax 919/966-7579, oshercww@sph.unc.edu, <http://www.sph.unc.edu/osherc/>. ☒

## Fred Oberman

Fred R. Oberman passed away after a short illness on July 30, 2005. He had been working at the Naval Surface Warfare Center at Carderock in the Human Systems Integration (HSI) Department.

For 33 years Oberman was at the forefront of getting human factors design standards into defense systems and was a pioneer in ensuring that human performance issues were addressed in the design and acquisition of Navy ships and ship systems. His dedication to the safety and survival of sailors in the U.S. Navy was unparalleled. Oberman was consistent throughout his career in demanding that ships and ship systems be usable, habitable, and safe. He participated in the development of the top-down requirements analysis methodology currently in use by the Navy by implementing HSI in the manning and design of ships. He was a leader in the assessment of ship motion effects on human performance and safety.

Oberman served in several leadership positions on the Department of Defense Human Engineering Technical Advisory Group, including chair of the Modeling and Simulation and of the Controls and Displays sub-TAGs. He was a member of the NATO Man-Machine Analysis Group (RSG-14). Oberman also served as a technical adviser on the development of human factors standards at the American Society for Testing and Materials. He worked for several years in the Human Factors Division of the Naval Sea Systems Command, where he was responsible for applying human factors methods, tools, and data to the design of a number of surface combatant ships, submarines, aircraft carriers, and ships of the Military Sealift Command.

Oberman held a B.A. in psychology from the University of Chicago, an M.S. in experimental psychology from Loyola University, and an M.S. from Virginia Tech in industrial engineering and operations research.

– Thomas B. Malone

**Bradley L. Allen** has joined Hewlett-Packard's Digital Projection & Imaging group as a human factors engineer. Allen may be reached at HP – DPI, 1000 NE Circle Blvd., MS 424B, Corvallis, OR 97330-4239, 541/715-1187, [bradley.allen@hp.com](mailto:bradley.allen@hp.com).

**Glenn A. Azevedo** has been awarded the Beckman Coulter Circle of Excellence Award. Azevedo, a senior environmental, health, and safety specialist at Beckman Coulter, was recognized for his ergonomics projects and machine-guarding assessments at Beckman Coulter facilities around the world. He may be reached at Beckman Coulter, Inc., 200 S. Kraemer Blvd., Brea, CA 92822-2000, 714/993-8349, [gpazevedo@beckman.com](mailto:gpazevedo@beckman.com).

**Paul S. Adams** has joined Applied Safety and Ergonomics, Inc., in Ann Arbor, Michigan as a senior safety engineer and ergonomist. He may be contacted at 3909 Research Park Dr., Ste. 300, Ann Arbor, MI 48108, 734/994-9400, [padams@appliedsafety.com](mailto:padams@appliedsafety.com). ☒

## New Journal from UPA

The Usability Professionals' Association will launch a new publication later this year, the *Journal of Usability Studies*. The peer-reviewed online journal will be dedicated to promoting and enhancing the practice, research, ethics, and education of usability engineering.

For more information about the *Journal of Usability Studies*, go to [http://www.upassoc.org/upa\\_publications/journal/](http://www.upassoc.org/upa_publications/journal/). Authors are encouraged to discuss ideas and submission suitability with Editor in Chief Avi Parush at [jus@upassoc.org](mailto:jus@upassoc.org). To submit an article, visit [http://usabilityprofessionals.org/upa\\_publications/jus/2005/aims.btml](http://usabilityprofessionals.org/upa_publications/jus/2005/aims.btml). ☒

## NEWS

## Materials-Handling Tables Now Available

A revised version of the Manual Material Handling Tables, last updated in 1991 by Stover H. Snook and Vincent M. Ciriello, is now available at the Web site of the Liberty Mutual Research Institute for Safety. The tables provide percentages of the male and female population capable of performing manual material handling tasks without overexertion, rather than maximum acceptable weights and forces. This manual material-handling analysis can be used to perform ergonomic assessments of lifting, lowering, pushing, pulling, and carrying tasks with the primary goal of supporting ergonomic design interventions. The new tables may be viewed on the Web at <http://www.libertymutual.com/researchinstitute>. ☒

## IN THE NEWS

**Alison M. Smiley** was quoted in a February 23 *Montreal Gazette* article on the difficulty of driving in Montreal and Toronto because of a range of sign locations, colors, and letter sizes. Smiley is a signage expert for Human Factors North and has studied street markers around the world.

**William R. Dowell** was featured in Malcolm Gladwell's best-selling book *Blink*, published in 2005. Dowell, manager of product research at Herman Miller, was quoted in the book about his experiences developing Herman Miller's Aeron chair.

**Thomas J. Albin, Tamara James, and Carolyn M. Sommerich** were featured in an April 13 article in *USA Today* about increasing concerns about injuries resulting from using laptop computers.

**Andrew S. Imada** was profiled in the June 24, 2005, *Maui News* article "Simple Listening Can Be a 'Powerful Tool for Learning.'" Imada, a keynote speaker at the Eighth International Symposium on Human Factors in Organizational Design and Management, held in Hawaii in June, shared his experiences as a macroergonomics consultant. **Hal W. Hendrick**, another speaker at the conference, was also featured in the article. ☒

## CALENDAR

*Announcement deadlines: 1st day of the month prior to the desired issue; for events or deadlines within the first 3 weeks of a month, send information at least 2 months in advance. Items are published according to space availability.*

★ **2nd International DUX Conference**, November 3–5, 2005, San Francisco, CA. <http://www.dux.org/>.

★ **HFES New England Chapter 2005 Student Research Conference**, November 4, 2005, Medford, MA. David Aurelio, [david\\_aurelio@bose.com](mailto:david_aurelio@bose.com), <http://www.necfhes.org/>.

★ **13th National Quality Education Conference**, November 13–15, 2005, Miami, FL. American Society for Quality, P.O. Box 3005, Milwaukee, WI 53201-3005, 414/272-8575, fax 414/272-1734, [help@asq.org](mailto:help@asq.org), <http://www.asq.org/conferences/quality-education-conference/>.

★ **43rd Annual Applied Reliability Engineering and Management Institute**, November 14–17, 2005, Tucson, AZ. Dimitri B. Kececioglu, University of Arizona, Aerospace and Mechanical Engineering Dept., 1130 N. Mountain Ave., Bldg. 119, Rm. N. 517, P.O. Box 210119, Tucson, AZ 85721-0119, 520/621-6120, fax 520/621-8191, [dimitri@u.arizona.edu](mailto:dimitri@u.arizona.edu).

**Second International Conference on Driver Behaviour and Training**, November 15–17, 2005, Edinburgh, Scotland. Tricia Jolly, Conference Coordinator, fax +44-1-1234-750192, [tjolly@cranfield.ac.uk](mailto:tjolly@cranfield.ac.uk), <http://www.dbt2005.info>.

★ **Second European Conference on Rail Human Factors**, November 21–23, 2005, London, UK. Centre for Rail Human Factors, University of Nottingham, University Park, Nottingham, NG7 2RD UK, <http://www.virart.nottingham.ac.uk/railhumanfactors/>.

★ *Indicates new listing.* ☒

# Bulletin

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Opinions expressed in BULLETIN articles are those of the authors and should not be considered as expressions of official policy by the Human Factors and Ergonomics Society.

**FLASH!**

## Dues Renewals Now Available Online!

You can now renew your HFES membership for 2006 at [hfes.org](http://hfes.org). You can also update your contact information online.

## Invitation for Fellows Applications

Applications for Fellows are due February 1, 2006. For more information about the application process, e-mail [lynn@hfes.org](mailto:lynn@hfes.org).



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