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Updated *Usability.gov* Has Value for All Users

By Ania Rodriguez and Marc Resnick

Today, user-centered design (UCD) is widely accepted as critical to the development of effective Web sites (Cooper, Reiman, & Cronin, 2007; Galitz, 2007), but this was not always the case. Just 5 years ago, human factors/ergonomics (HF/E) practitioners often battled with Web site developers to prioritize usability when allocating time and resources to the design process. It is thus remarkable that in 1999, the National Cancer Institute's Communications Technology Branch recognized the importance of UCD and created *www.usability.gov* as a place to share their insights about usable Web design with other government Web designers (Koyani, 2002).

This article provides a brief overview of the *usability.gov* site and how it is typically used by Web site developers and consultants.

The History of *usability.gov*

In 1999, the average Web designer may not have immediately thought of the National Cancer Institute as the place to go for usability expertise. But *usability.gov* turned out to be an excellent resource, and the information provided has been useful to designers in other fields besides government, its original target audience. It provided guidance for several steps of the design process, including interviewing users, prototyping, and screen layout.

The site was updated in 2006, and the new version is available at the *usability.gov* Web site and for purchase as a hard copy. This version is more extensive and includes background materials, design guidelines for a wide variety of Web elements, short descriptions of how to conduct some of the more common usability methods, and templates for an assortment of usability-related facilitators such as surveys and personas.

The source of the guidelines also merits comment. Because *usability.gov* was created by a U.S. government agency, it has a certain imprimatur that sets it apart from other usability guidelines. The site does not advertise its origins at NCI, so the only distinguishing identifier seen by a new visitor would be the ".gov" in the URL. We do not believe this is done with any misleading intentions, but it does elevate the perceived authority of the site as well as its inherent scientific validity. On the other hand, it is rewarding to see the federal government create such a comprehensive, useful, and user-friendly resource.

How the Private Sector Uses *usability.gov*

The *usability.gov* site was created to support government work, but the information provided is helpful for many private-sector users. Usability consultants who work in the private sector can leverage *usability.gov* in their design practices while educating clients and stakeholders. Corporate usability champions can use the site to increase awareness of usability processes and methods within their companies. The *usability.gov* site also can be used like a cookbook; one can employ the step-by-step instructions to plan, analyze, redesign, test, and refine Web sites and internal applications.

The site is a valuable resource for moving from the planning stage to the actual development stage; it has instructions and templates for creating a usability plan. The site does not, however, provide insight on the different roles by phase (people needed to perform the activities that get done at each step of the development process), similar to what can be found on IBM's Ease of Use site (<http://www.3.ibm.com/easy/page/2096>). The *usability.gov* site provides an overview of each of the activities of user-centered design organized by phase. Each activity is then further described, providing users with an introductory understanding of the scope and purpose of each activity. Unfortunately, the site does not have timeline and schedule information, which are needed to understand the effort and resources required to complete each activity. Indeed, the site lacks insight into the impact of omitting an activity from the work plan. It does, however, provide helpful information on how to hire a usability specialist.

The site offers scant insight as to which tools work best for certain activities; instead, it provides simple Microsoft Word and Excel templates. *Usability.gov* provides samples of project-planning documents such as kick-off meeting questions, usability statements of work (SOW) for acquiring consultants to help with analysis and testing, and a sample SOW for recruiting usability test participants. Further, it offers helpful examples of user surveys and personas. The only mention of tooling that the site provides is WebCAT, a card-sorting tool inspired by IBM EZ Sort. This tool is used when grouping content and devising an original information architecture. Finally, the testing documents and templates in *usability.gov* are well documented and can provide a novice with

Updated Usability.gov Has Value for All Users

(continued from page 1)

some of the necessary information to run a trial usability test and to learn from it.

One notable limitation of the site is its reliance on the linear waterfall model. In many situations, a more agile model that allows development teams to work in parallel is needed. Adapting the waterfall methodology to integrate agile techniques helps, especially when development teams are anxious to start coding without waiting for analysis and design phases to be completed (Sy, 2007). In this respect, the site provides limited information as to the dependencies of each design activity. A usability specialist is needed to educate the project team about how to run activities in parallel to shorten the timeline.

For consultants, *usability.gov*'s list of research-based guidelines (located at <http://www.usability.gov/pdfs/guidelines.html>) is the most useful section. The guidelines are particularly valuable because they provide both a relative-importance and strength-of-evidence scale. The relative-importance rating measures the weight of each guideline in contributing to the success of a Web site. The strength-of-evidence rating gauges the amount of existing research that supports each guideline, as well as the level of agreement within the expert community. Usability specialists outside academia rarely have the time to keep up on the latest research findings, so this kind of summary provides support for the insights they develop through experience. Also, it provides a basis to help them categorize and prioritize usability issues uncovered during a heuristic evaluation.

User interface designers also can use these research-based guidelines to justify their design decisions. During the planning process, designers may encounter resistance to creative decisions made to enhance the user interface. The guidelines provide design teams with ammunition to defend their recommendations to managers, directors, and stakeholders who are not end users. The guidelines can help usability practitioners get design teams out of their comfort zones and to implement user-centered options instead of old versions that developers are familiar with – a reality that usability practitioners encounter all too often!

The *usability.gov* site also publishes newsletters that can be valuable to all practitioners. For example, the May 2007 issue contains an article that summarizes the pros and cons of underlining links. The short article also provides insights on the use of underlining in practice. These types of articles can be useful in the continuing

education of practitioners as new research findings and practices emerge.

The Future of *usability.gov*

With the proliferation of Web 2.0 and as knowledge workers become part of the design community, *usability.gov* can continue to support the development of effective Web sites in new and innovative ways. Mashup makers (i.e., OpenKapow and QEDWiki) and easy-to-use creative tools are making their way into the marketplace. We hope that the owners of *usability.gov* continue to expand the site's resources and provide solid support for Web 2.0 designers, and take on some of this Web 2.0 functionality itself in the form of usability mashups and wikis.

References

- Cooper, A., Reimann, R., & Cronin, D. (2007). *About face: The essentials of interaction design*. New York: Wiley.
- Galitz, W. O. (2007). *The essential guide to user interface design*. New York: Wiley.
- Koyani, S. (2002, April 1). The story behind usability.gov. *Boxes and Arrows*. Retrieved May 28, 2007 at www.boxesandarrows.com/view/the_story_behind_usability.gov.
- Sy, D. (2007). Adapting usability investigations for agile user-centered design. *Journal of Usability Studies* 2(3), 112–132.

Ania Rodriguez is the senior manager of Customer Experience Research at Keynote Systems. She holds a B.S. from Carnegie Mellon and an M.S. from University of Miami in industrial engineering with a concentration in human factors.

Marc Resnick is director of the Institute for Technology Innovation and associate professor of industrial and systems engineering at Florida International University. He received a B.S. in engineering psychology from Tufts University and an M.S. and Ph.D. in industrial and operations engineering from the University of Michigan. ☒

ANNUAL MEETING

Grand Challenges for HFES and Its Place in a Changing World

By Waldemar Karwowski, HFES President

This article offers a preview of Waldemar Karwowski's presidential address, which he will deliver at the HFES Annual Meeting during the Opening Plenary Session on October 2.

The world has undergone remarkable changes since HFES was formed 50 years ago. The Society's mission, however, has remained static. Even the term *ergonomics*, coined in 1857 by Wojciech Jastrebowski in the first published treatise on this new science, continues to be refined and redefined to this day. Over the past half-century, the human factors/ergonomics (HF/E) field has been evolving as a unique and independent discipline that focuses on the nature of human-artifact interactions, as viewed from the unified perspective of science, engineering, design, technology, and management of human-compatible systems – including a variety of natural and artificial products, processes, and living environments.



Bulletin

Volume 50, Number 8

August 2007

The *HFES Bulletin* (ISSN 1527-3660) is published 12 times a year by the Human Factors and Ergonomics Society, 1124 Montana Ave., Suite B, Santa Monica, CA 90403 USA, <http://hfes.org>. Address inquiries and address changes to HFES, P.O. Box 1369, Santa Monica, CA 90406-1369 USA, 310/394-1811, fax 310/394-2410, <http://hfes.org>.

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Waldemar Karwowski

The HFES mission is to “promote the discovery and exchange of knowledge concerning the characteristics of human beings that are applicable to the design of systems and devices of all kinds ... [and] advocate systematic use of such knowledge to achieve compatibility in the design of interactive systems of people, machines, and environments to ensure their effectiveness, safety, and ease of performance” (*www.hfes.org*). Does “effectiveness, safety, and ease of performance” encompass everything for which the Society stands? Are issues such as sustainable environments, greenhouse gas emissions, and the security of our supply of energy and clean water for the entire population important enough for us to consider changing our mission?

Over the past several years, HFES has been transforming itself into a global professional society with significant presence in different parts of the world (chapters in Europe, Ukraine, and, recently, the People’s Republic of China). As one of the most developed HF/E societies in the world, should we think and act globally in cooperation and collaboration with IEA and other relevant organizations? If so, what are the international opportunities (e.g., membership growth), challenges (e.g., how to contribute to the development of the HF/E discipline worldwide), and responsibilities (e.g., how to contribute in a meaningful way to the development of sustainable technology)?

Recently, the National Academy of Engineering began an open debate on the world’s grand challenges and opportunities for engineering in the new millennium. To date, a large number of ideas and opinions have been proposed. We need to address these issues and ask ourselves: What are the greatest challenges for our discipline and, consequently, for our profession in the next 50 years? (I recently sent an e-mail to members on this topic.) Is it our greatest challenge to redefine ourselves in view of the rapidly changing global landscape, or should we just refine what we do today?

I invite you to attend the Opening Plenary Session on October 2, when I will elaborate on these points in my presidential address, “HFES and Its Place in a Changing World: Grand Challenges and Opportunities for Our Discipline in the 21st Century.”

CPSC’s Nancy Nord to Deliver Keynote Address

Nancy Nord, acting chairman of the U.S. Consumer Product Safety Commission (CPSC), will deliver the keynote address at the 51st Annual Meeting during the Opening Plenary Session, which begins at 8:00 a.m. on Tuesday, October 2. Nord will focus on the vital role of CPSC’s human factors experts in identifying and addressing product safety hazards. CPSC, a small independent regulatory agency, is responsible for protecting children and families from unreasonable risk of death and injury from more than 15,000 types of products that consumers use every day in and around their homes and in recreational activities.



Nancy Nord

Acting Chairman Nord will discuss the importance of incorporating human factors/ergonomics (HF/E) concepts into product design. She will ask the HF/E community to work with the CPSC by promoting safe product design, conducting relevant research, and providing expert advice to the commission. Attendees will be encouraged to contact CPSC with their product experiences through CPSC’s new online consumer opinion forum, and to become safety-conscious consumers by signing up for product recall information.

Nord holds a bachelor’s degree from the University of Nebraska and a law degree from George Washington University. Her federal experience includes service as general counsel of the White House Council on Environmental Quality, counsel to the Commerce Committee of the U.S. House of Representatives, and attorney at the Federal Communications Commission. In the private sector, she was director of federal affairs for The Eastman Kodak Company; practiced law with the Washington, D.C., law firm of Verner, Liipfert, Bernhard, McPherson and Hand; served as executive director of the American Corporate Counsel Association; and was director of consumer affairs for the U.S. Chamber of Commerce.

ACTG Has Full Schedule on Tap

You can expect to see updates for the newly approved Augmented Cognition Technical Group and related events at the 2007 Augmented Cognition International (ACI) conference, which takes place October 1–3, 2007, at the Baltimore Marriott Waterfront Hotel in conjunction with the HFES 51st Annual Meeting. Join us for these events:

- On Monday, October 1, from 8:00 a.m. to 6:00 p.m., ACI will host four contiguous paper sessions, which will be open to all registered HFES Annual Meeting attendees.
- A special session of “The Best of ACI 2007” will be presented on Tuesday, October 2, from 3:30 to 5:00 p.m. This session will feature presentations from authors of the best ACI 2007 paper submissions, selected by the ACI 2007 Editorial Review Board. To kick off this session, Dylan Schmorrow will present these authors with ACI ’07 Best Paper Awards.
- ACI posters will be displayed during the regular Annual Meeting poster sessions on October 2 from 1:30 to 3:00 p.m. and on October 3 from 10:30 a.m. to noon.
- On October 2, from 6:30 to 9:30 p.m., ACI will hold its awards banquet, which will be open to 51st Annual Meeting attendees who register for it. (See the Social Events section of the Registration Form.) Seating is limited and available on a first-come, first-served basis, so please register early. This year’s banquet will include invited speakers, additional posters, interactive demonstrations, and the presentation of the 2007 ACI awards.

Laughery and Wogalter to Discuss Warnings in Arnold Small Lecture

By Michael Kalsber, *Arnold Small Lecture in Safety Chair*

Practical research on public warnings has risen substantially in the past 25 years. Kenneth R. Laughery and Michael S. Wogalter, this year's invited speakers for the 2007 Safety Technical Group Arnold Small Lecture, will examine the progress, current status, and thoughts on the future direction of safety warnings. The lecture, a staple of the HFES Annual Meeting for almost 20 years, will be held on Wednesday, October 3, at 1:30 p.m.

Laughery and Wogalter will assess the progress of warnings research during the past quarter-century. What have we learned? What is important and what is not? They will cull examples from their expert witness work in the context of litigation to illustrate interesting real-world hazard control issues that in turn have influenced research programs and theory building. In addition, Laughery and Wogalter will offer some ideas and suggestions as to where warnings research is headed in the future. Advancing technology and expanding global trade are but two of the opportunities and challenges for the warnings research of tomorrow.

Neural, Genetic, Cognitive, and Psychometric Approaches to Individual Differences

By James Szalma, *Individual Differences in Performance TG Program Chair*


The ability to account for individual differences in human performance has important consequences for human factors/ergonomics. A panel discussion on Tuesday, October 2, at 10:30 a.m. will highlight theoretical as well as practical considerations when addressing individual differences in human performance. At a theoretical level, an improved understanding of individual differences can reveal whether theories and models of human performance based on group data are representative of all individuals, and, if not, how these models must be modified. At a practical level, better partitioning of sources of individual differences might lead to improved selection and training procedures.

The panel will be chaired by Joel S. Warm; participants include Raja Parasuraman, Gerald Matthews, Carryl Baldwin, and James Szalma. Panel members will consider different approaches to individual differences in human performance and the theoretical and practical implications for the design of human-technology interfaces and training procedures of each. Accordingly, this panel will present the results of recent studies by using neural, genetic, cognitive, and psychometric measures to examine individual differences in human performance.

CEDM Program Answers Challenges With New Solutions

By Catherine Burns, *CEDM-TG Program Chair*

The Cognitive Engineering and Decision Making Technical Group program at this year's Annual Meeting will offer multiple perspectives on how people cope with complex decision making. The problems tackled by researchers in this group will focus on the problems that face contemporary society. This year, CEDM has put together 15 sessions scheduled throughout the conference. Highlights of the program include three discussion panels: "Modern Technology Failures, Cognitive Engineering Successes"; "Meta-Information Communication and Representation"; and "Macro-cognition Metrics: Meaningful Measures for Complex Processes." There will be lecture sessions on intelligence analysis, work with automation, and support of situation awareness in complex environments.

The challenges ahead are formidable, but this year's CEDM program combines the latest research with fresh perspectives on how to improve decision making when facing these vexing problems. 

ELECTIONS

HFES Election Results

The deadline for submitting election ballots has passed, and the following elected members will begin their terms in fall 2007:


President-Elect

Paul Allan Green, University of Michigan Transportation Research Institute

Secretary-Treasurer-Elect

Andrew S. Imada, A. S. Imada & Associates

Executive Council at-Large

Nancy J. Cooke, Arizona State University
Carol Stuart-Buttle, Stuart-Buttle Ergonomics 

ERGONOMICS IN DESIGN

EID Appoints Senior Editors

By C. Melody Carswell, *EID Editor*

Ergonomics in Design, the Society's practice-oriented quarterly, has selected four new senior editors from among its current associate editors. Cathy Emery (GE), Jay Pollack (Crown Equipment), Susan Spraragen (IBM), and Thurmon Lockhart (Virginia Tech) have agreed to accept these positions. Their appointment reflects

their many contributions to the quarterly, their broad range of topical expertise and practical experience, and their accomplishments within the field as a whole.

EID's senior editors will collaborate with me to enhance the manuscript review process by soliciting reviews and making decisions about manuscript acceptability. The new structure of the editorial board is designed to increase the speed with which manuscripts can be processed and authors notified of publication decisions.

The shift in responsibilities for these four senior editors leaves vacancies on the editorial board for four to six new associate editors. Readers interested in being considered for the editorial board should send a current CV to Assistant Managing Editor Jason Dean (jason@hfes.org). If you would like to learn more about the responsibilities of an associate editor, please contact me at cmcars00@uky.edu. Practitioners in the areas of environmental design, macroergonomics, industrial ergonomics, product design, and forensic human factors are particularly encouraged to apply. However, applications will also be welcomed from individuals with a broad range of experience across several application sectors. ☒

TECHNICAL GROUPS

The Augmented Cognition Technical Group Is Official!

By Leah M. Reeves, Newsletter Editor, and Kay M. Stanney, Chair

The HFES Executive Council officially approved the new Augmented Cognition Technical Group (ACTG) in June. The organization thanks all current HFES members who enthusiastically expressed interest in joining. We were able to garner additional support from their colleagues to round out the initial roster and look forward to welcoming additional HFES members. Your continued interest and support will be key to our group's success in the coming years.

The ACTG will focus on research and development associated with

- real-time physiological and neurophysiological sensing technologies that can ascertain the human cognitive state when interacting with computing-based systems,
- data classification and integration architectures that enable closed-loop system applications,
- mitigation (adaptive) strategies that enable efficient and effective system adaptation based on a user's dynamically changing cognitive state,
- individually tailored training systems; and
- roadmaps for future directions that concern augmented cognition (AugCog) science and technology, guidelines of use for the technology, and user information that may be gained from it.

The ACTG will serve as a forum for fostering the continual design and development of AugCog science and technology and for the exchange and dissemination of information, which will provide another exciting opportunity for the human factors and augmented cognition fields to promote and leverage science and technolo-

gy breakthroughs, applications, and lessons learned in both fields. The ACTG and its officers take a particular interest in continuing to provide novel and interactive venues for researchers, scientists, engineers, and practitioners to disseminate and exchange information and understanding and to present late-breaking research and application results that concern the perceptual, cognitive, and neurological aspects of the burgeoning field of AugCog. We believe that through such recurrent exchange of ideas and information, today's AugCog researchers and developers will continue to address basic human factors/ergonomics R&D challenges and will put AugCog tools and methods into practice to develop numerous and diverse applications, including academic research, industrial- and military-fielded operational and training systems, and everyday computing and entertainment applications.

For more information about the ACTG, contact Leah Reeves (leah@augmentedcognition.org), or visit www.augmentedcognition.org for general information about the AugCog field and upcoming events. We will continue to post ACTG updates in future issues of the *HFES Bulletin* and in ACTG e-newsletters.

You can join the ACTG online at the HFES Web site (<http://www.hfes.org/web/TechnicalGroups/technical.html>). ☒

STUDENT VIEWS

A Student Conference for Human Factors and Applied Psychology

By Beth Blickensderfer and Mark Bartosiewicz

The first-ever Florida Student Conference on Human Factors and Applied Psychology was held on April 5, 2007, in Daytona Beach, Florida. Hosted by the Embry-Riddle Aeronautical University (ERAU) Human Factors and Systems Department, the meeting allowed undergraduate and graduate students to present their research in a collegial environment and to network with students and faculty in Florida who have similar research interests. Six universities were represented at the conference: Bethune-Cookman University (BCU), ERAU Daytona Beach, Florida Institute of Technology (FIT), University of Central Florida (UCF), University of North Florida (UNF), and University of South Florida (USF).

Stephen F. Davis delivered the plenary address, "Why Student Research Is Important." Davis is a fellow of the Association for Psychological Science and Divisions 1 (General), 2 (Society for the Teaching of Psychology), 3 (Experimental), and 6 (Behavioral Neuroscience and Comparative Psychology) of the American Psychological Association. The rest of the day featured 24 student lectures and 8 poster sessions. Students were the first authors of all papers. General topics included cognitive psychology, experimental psychology, human factors, industrial/organizational psychology, and physiological psychology.

Presentation award winners included Megan Hodges and Maranda McBride, ERAU ("Gender Differences in Auditory Perception of Pure Tone Frequencies"); Marie-Jeanne Steady Ndiaye, ERAU ("Applying Discrete Event Simulation to Determine Workforce Requirement[s] for Multiple Production Lines"); Elizabeth Sanz and Dominic Guss, UNF ("Strategies and Performance of

Dyads in Complex Problem Solving”); and Maria Speder, John E. Deaton, Donna Wilt, and Richard Griffith, FIT (“The Impact of Pilot Experience on Aeronautical Decision Making [ADM] Aided by the Use of Advanced In-Flight Weather Products”).

The conference was cochaired by Beth Blickensderfer, assistant professor in the ERAU Human Factors and Systems Department, and Tiffany Nickens, a graduate student at ERAU. The HFES ERAU Student Chapter and the ERAU chapter of Psi Chi helped with logistics. Conference sponsors included HFES, the ERAU Human Factors and Systems Department, and Coldstone Creamery at Oceanwalk, Daytona Beach. Plans are under way for a follow-up event in the spring of 2008. Additional information can be obtained from <http://www.erau.edu/omni/db/academicorgs/dbbfasd/currentnews.html>.

Beth Blickensderfer is an assistant professor in the Human Factors and Systems Department at Embry-Riddle Aeronautical University.

Mark Bartosiewicz is a graduate student at Embry-Riddle Aeronautical University. ☒

LAB REPORTS

PROF: Patient Room of the Future Research Laboratory

By Richard Pak, Clemson University

A research team headed by faculty from Clemson University’s architecture and health program (Dina Battisto and David Allison) and Department of Psychology (Richard Pak) is studying patient room design and user safety by empirically testing innovative physical design concepts aimed at improving health care operations, workplace safety, and satisfaction.

Modern patient rooms in hospitals are complex systems that have multiple users (doctors, nurses, nursing techs, and patients). The high level of complexity in these environments and mismatches between user capabilities and system demands can have devastating consequences, including patient injury or death, and repetitive stress injury for nurses and nursing techs.

PROF research will be conducted in two main labs: the Clinical Learning and Resource Center (CLRC) on the Clemson University campus and the Pelham Research Facility, a temporary warehouse located on Spartanburg Regional Healthcare System’s (SRHS) new satellite hospital campus in South Carolina. The CLRC resembles a hospital nursing unit complete with three modular patient care bays and an adaptable “Black Box” patient care bay. The CLRC is used primarily by Clemson’s Nursing School for training nursing students. The group will conduct research that requires a high degree of experimental control (e.g., studies examining nursing performance with information technology). The “black box” bay provides ultimate flexibility so that every aspect (e.g., wall location, equipment type and location), can be adapted to various configurations.

The larger Pelham Research Facility will feature two full-scale replicas of award-winning single-bed hospital patient rooms, and in it design concepts will be studied using nursing participants from SRHS. The adaptability of the room will allow us to empirically examine alternative patient room designs and components to understand if and how environmental design reduces nurse workload and error.

The design of both facilities will allow us to examine the full range of micro- and macroergonomic issues inherent in the health care environment. One study will examine the influence of a newly designed patient headwall on nursing task performance. (The patient headwall functions as a control and clinic support element for the doctor, nurse, and patient.) Our analysis of the users, tasks, and environment suggests that nursing task performance and satisfaction could be enhanced with a modified vertical headwall, and our study will examine this premise.

PROF is a multidisciplinary research partnership between Clemson University and SRHS and is partially funded by the Department of Defense’s Hospital of the Future program.

Richard Pak is an assistant professor in the Clemson University Department of Psychology (Human Factors). His research interests include cognitive aging and human factors in technology. ☒

NEWS

Symposium Highlights Injury Prevention; Honors Tom Leamon

By Jack Dennerlein

The Department of Environmental Health at the Harvard School of Public Health held the Global Burden of Injury Symposium on April 14 in Boston. During the event, Tom Leamon was recognized for his contributions to the scientific study of injury, which have helped effect revolutionary changes in both the workplace and academic institutions.

The symposium explored three areas of injury prevention research that carry global significance: road traffic injuries in developing nations, work-related injuries in Southeast Asia, and international injury prevention research priorities.

Kavi Bhalla from the Harvard Initiative for Global Health said that assessing the public health burden and evaluating the impact of safety policies relies on the ability to collect accurate data on road traffic injuries. Bhalla is developing the infrastructure and collecting data for a road traffic injury database through support from the World Bank Global Road Safety Facility.

Helen Marucci-Wellman from the Liberty Mutual Research Institute for Safety described the cultural challenges of designing a work-related injury database in Vietnam. With assistance from David Kriebel (U. of Massachusetts), the Vietnam National Institute of Occupational and Environmental Health, and the Vietnam Occupational Health Association, Marucci-Wellman has been working within the communal, small business structure of the Vietnamese economy to capture injury data.

The final session of the symposium was led by Kriebel and Jack Dennerlein from the Harvard School of Public Health, who discussed the need for continued injury prevention research. Kriebel stressed the importance of considering cultural and sociological factors when researching the global burden of occupational injury. Both Kriebel and Dennerlein agreed that better surveillance data are needed to accurately measure the impact of injury and the factors affecting injury outcomes.

The evening concluded with a dinner to honor Leamon's leadership and continued commitment to injury prevention research.

Jack Dennerlein is an associate professor of ergonomics and safety in the Department of Environmental Health at the Harvard School of Public Health. ☒

JCEDM

JCEDM Special Section

By Richard Pew and Emilie Roth, Special Section Editors

We invite papers for a special section of the new HFES periodical, *Journal of Cognitive Engineering and Decision Making*, devoted to current frontiers of the integration of cognitive engineering and related human-centered design approaches into the systems engineering process.

Traditional practices in systems and software engineering often do not expressly consider human-centered objectives and constraints in defining system requirements, or these are considered too late in the design cycle to have any meaningful impact in shaping the design. Cognitive engineering (CE) methods and tools offer the potential to contribute to the development of systems that support individuals, teams, and organizations in achieving

their objectives. There have been significant advances in the development of CE methods and tools, but these methods have yet to be widely adopted into large-system procurement and development programs.

There is growing interest in understanding the barriers that have prevented CE methods from being more widely integrated into large-system development programs and in developing new approaches (i.e., new tools, training, collaborative design frameworks, and outreach programs) to more effectively bridge the gap between cognitive engineering and the larger systems and software-engineering enterprise. This special section, titled "Integrating Cognitive Engineering in the Systems Engineering Process: Opportunities, Challenges, and Emerging Approaches," seeks to serve this purpose.

Suggested paper topics include, but are not limited to,

- new or revised methods, tools, training, collaborative design frameworks, and outreach programs supporting CE in system development;
- new or innovative methods for representing the output of CE analyses for other system engineering stakeholders;
- methods for assuring the inclusion of CE analyses in system development processes; and
- example applications of CE to system development.

Prepare manuscripts according to *JCEDM* guidelines, which follow the *Publication Manual of the American Psychological Association* (5th ed.). Manuscripts should not exceed 25 pages and should be submitted electronically to cedm.journal@satechnologies.com, with the subject line "Submission for Integrating CE in the Systems Engineering Process."

The closing date for submissions is **November 30, 2007**. Please let us know by September 30, 2007, if you are planning to submit a paper. If you have any questions, please contact Richard Pew (pew@bbn.com) or Emilie Roth (emroth@mindspring.com). ☒

FIRST ISSUE AVAILABLE!

Journal of Cognitive Engineering and Decision Making

The Human Factors and Ergonomics Society launched a new publication in spring 2007, *Journal of Cognitive Engineering and Decision Making*. *JCEDM* focuses on research that seeks to understand how people engage in cognitive work in real-world settings and the development of systems that support that work.

JCEDM differs from most journals by supporting research that grapples with the messy, hard-to-define, and difficult-to-study realities that confront humans as they attempt to interact effectively with complex environments. Emphasis is on descriptive models of decision making and macrocognition that consider people working alone or in conjunction with other individuals or intelligent systems, and the factors affecting decision making and cognition in realistic settings.

JCEDM embraces many aspects of human problem solving that have been largely neglected by experimental psychology, including situation awareness, problem definition, planning, attention and uncertainty management, mental projection and simulation, diagnosis, solution validation, adaptation, coordination and shared situation awareness in teams, and metacognition.

JCEDM invites submissions for its three topical tracks: Cognition in Context, Studies in Simulations and Synthetic Environments, and Design of Complex and Joint Cognitive Systems. Details about the three topical tracks in *JCEDM* may be found on the Web:

<http://www.hfes.org/Publications/ProductDetail.aspx?ProductID=64>.

Send your *JCEDM* submissions to cedm.journal@satechnologies.com.

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HFES Career Center

On-Site Employment Services at the Annual Meeting

The on-site Career Center provides an outstanding opportunity for employers and job seekers to meet informally and in prearranged interviews.

■ CAREER CENTER HOURS:

Monday, October 1	1:00 p.m. to 6:00 p.m.
Tuesday–Wednesday, October 2–3	8:30 a.m. to 6:00 p.m.
Thursday, October 4	8:30 a.m. to 5:00 p.m.

■ EMPLOYERS ON SITE

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

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

■ CANDIDATES ON SITE

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

If you plan to be available for interviews at the HFES 51st Annual Meeting, bring copies of your résumé to the meeting and check the HFES Web site <http://hfes.org> to see a listing of the employers who will be conducting interviews during the Annual Meeting.

Bulletin

Volume 50, Number 8 August 2007

Features Editor: Pamela Savage-Knepshield
Student Views Editor: Melanie Diez
Communications Director: Lois Smith
Assistant Managing Editor: Jason Dean
Advertising: R. C. Bublitz & Associates,
800/485-5029; dick-rcb@juno.com

POSTMASTER:

Send address changes to the HFES Bulletin,
Human Factors and Ergonomics Society,
P.O. Box 1369, Santa Monica, CA 90406-1369 USA,
310/394-1811, fax 310/394-2410, <http://hfes.org>

General Information: info@hfes.org
Editorial/Advertising: lois@hfes.org
Placement Service: placement@hfes.org
Annual Meeting: lois@hfes.org

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.



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P.O. Box 1369
Santa Monica, CA
90406-1369 USA

FLASH!

51st Annual Meeting

Registration is open! Special rates apply until August 27. Go to <http://hfes.org> and click the “HFES Meetings” navigation bar on the left side of the home page for details about . . .

- booking your room at the Baltimore Marriott Waterfront Hotel by September 10 to receive the HFES rate
- viewing the online preliminary program to find sessions and papers of interest
- reserving exhibit booths or sponsorships
- preparing your accepted poster for display during the meeting
- viewing the schedule of technical group business meetings

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