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How To Get NSF Research Funding

By Dianne Maranto, John Hollenbeck, & Eduardo Salas

Last December, as part of an American Psychological Association (APA) Science Policy outreach effort, the three of us met with staff at the National Science Foundation (NSF) in Arlington, Virginia, to discuss some of NSF’s programs and the potential for human factors and industrial/organizational psychologists to secure funding and contribute to their research base. NSF has two ongoing programs and one new priority area that hold promise for human factors research. Our purpose here is to encourage you to pursue NSF research grants and introduce you to the what, how, and why of NSF research.

NSF Programs

NSF’s mission is to “promote the progress of science; to advance the national health, prosperity, and welfare; and to secure the national defense.” NSF’s fiscal year 2004 budget is about \$5.6 billion, \$4.3 billion of which will be granted for research. It is organized into seven directorates: Biological Sciences; Computer and Information Science & Engineering; Education and Human Resources; Engineering, Geosciences, Mathematical and Physical Sciences; and Social, Behavioral & Economic Sciences. NSF’s Web site (www.nsf.gov) is fairly easy to navigate. The FY 2004 guide to programs (<http://www.nsf.gov/od/lpa/news/publicat/nsf04009/start.htm>) is a good way to begin a general search for funding opportunities at NSF. You can also join a list server to receive e-mail notices of program announcements via NSF’s custom news service (<http://www.nsf.gov/home/cns/index.cfm>).

APA’s Public Policy Office monitors NSF and actively advocates for research funding for the behavioral and social sciences. If you would like more all-around NSF information, contact Heather Kelly at hkelly@apa.org. APA also routinely monitors NSF funding announcements and posts notices that may be of interest to human factors psychologists to the PSWIN list server, <http://listserve.apa.org/archives/PSWIN.html>.

There are three specific programs at NSF that hold promise for human factors research: Decision, Risk & Management Sciences; the Human & Social Dynamics Program; and Innovation & Organizational Change.

The **Decision, Risk & Management Sciences (DRMS)** program (<http://www.nsf.gov/sbe/ses/drms/start.htm>) resides within NSF’s Social, Behavioral and Economic (SBE) Sciences Directorate. DRMS supports research that explores fundamental issues

in management science, risk analysis, societal and public policy decision making, behavioral decision making and judgment, organizational design, and decision making under uncertainty. Research should incorporate social, behavioral, or organizational aspects of operational processes and decision making. Research supported by DRMS should (a) have relevance to an operational context, (b) be grounded in theory, (c) be based on empirical observation or be subject to empirical validation, and (d) be generalizable. DRMS funds approximately \$5.1 million annually, with about a 20% acceptance rate. Grant proposal deadlines are January 15 and August 15.

The **Human & Social Dynamics (HSD)** priority area is brand new and spans all NSF directorates (<http://www.nsf.gov/home/crssprgm/hsd/>). The HSD priority area seeks to stimulate breakthroughs in knowledge about human action and development as well as organizational, cultural, and societal adaptation and change. Research about human and social behavior is increasingly characterized by a focus on dynamics – on how cognitive systems, individuals, formal and informal organizations, cultures, and societies evolve and change over space and time.

Through the HSD priority area, NSF seeks to promote research and education activities that will enable the nation to better understand the causes and ramifications of myriad forms of change that have altered the world. HSD aims to increase people’s collective ability to anticipate the complex consequences of change; to better understand the dynamics of human and social behavior at all levels, including that of the human mind; to better understand the cognitive and social structures that create and define change; and to help people and organizations better manage profound or rapid change. Accomplishing these goals requires a comprehensive multidisciplinary approach across science, engineering, and education, including the development of an infrastructure that can support such efforts.

In its first year, the HSD priority area will support research within and across six emphasis areas: Agents of Change, Dynamics of Human Behavior, Decision Making and Risk, Spatial Social Science, Modeling Human and Social Dynamics, and Instrumentation and Data Resource Development. For a detailed description of the emphasis areas, go to <http://www.nsf.gov/home/crssprgm/hsd/areas.htm>. For 2004, NSF will grant \$18 million in an estimated 40–60 awards. The deadline for these (March 31) may have

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Puget Sound Chapter Hosts Symposium

By Ben Zavitz, PSHFES President

The Puget Sound Chapter (PSHFES) conducted its Third Annual Pacific Northwest Occupational Ergonomics Symposium in Seattle, Washington, on November 5, 2003, the day after the statewide election in which Washington's Ergonomics Rule was repealed. This year's symposium was the best ever, with a record turnout of 85 attendees.

This year's theme was "Dynamic Solutions for Our Changing World." The symposium featured ten 30-minute presentations, a 45-minute breakout/group discussion, two live demonstrations of successful ergonomics solutions, and a drawing for 18 door prizes, including ergonomic chairs, ergonomic keyboards, foot insoles, an antifatigue mat, and custom-fit hearing protection.

The speakers were knowledgeable practitioners and researchers from the Pacific Northwest. Presentations included a practical approach to evaluating the physical demands of commercial construction: "Is the Washington State Ergonomics Rule Really that Scary?"; ergonomics of a handheld medical device (case study); the human factors and ergonomics of military systems: "The Workplace from Hell"; case studies in aerospace ergonomics; shipyard ergonomics: "They Said It Couldn't Be Done!"; office ergonomics: "Patterns of Muscle Use Influence Muscle Fatigue"; baseline exposure assessment results from a prospective study of upper-extremity musculoskeletal disorders; a method for evaluating multilifting tasks in manual materials handling; real-world case studies utilizing a multidisciplinary approach; and designing for an aging workforce.

PSHFES Programs Chair Amy May reports that the survey feedback regarding the symposium was a success. "The attendees appreciated the opportunity to network with each other and learn from the diverse knowledgeable speakers," May said. "They were very positive about the break-out/group discussion session, entitled 'The Day After,'" which referred to the previous day's election that repealed the state's Ergonomics Rule.

For the breakout discussion, attendees were divided into teams of 5–10 and asked to answer two questions: "What activities has your company done in the past few years in response to the Washington State Ergonomics Rule?" and "Given the results of the recent election, how will the ergonomics activities at your company change?" The teams discussed these questions and shared their comments. With few exceptions, attendees believed that their companies will continue to maintain ergonomics at the same level of priority as it was held before the repeal of the regulation.

This year we decided to offer corporate sponsorship, and the response was amazing, with 11 companies supporting the symposium. Chapter members thank *ErgoSolutions* magazine, ergoGenesis/Bodybilt, Neutral Posture, Prezant Associates and StewartPrezant Ergonomics Group, Boeing 737/757 Programs, Superfeet, Clayton Group Services, Kinesis, ErgoMaster, Custom Protect Hearing Protection, and the Puget Sound Chapter of the Institute of Industrial Engineers.

If you would like to learn more about the Third Annual Symposium or the Puget Sound Chapter, please contact me at president@pshfes.org.

Ben Zavitz is a senior ergonomist with StewartPrezant Ergonomics Group in Seattle, Washington, and is president of the Puget Sound Chapter of HFES. He is a Board Certified Professional Ergonomist with ten years of experience in the field of occupational ergonomics.

New England Chapter Joint Association Event

By Elizabeth Rosenzweig & Tony Brown

Despite subzero temperatures in the Cambridge, Massachusetts, area, more than 100 people from the local chapters of Usability Professionals Association (UPA), ACM Special Interest Group for Computer-Human Interaction (SIGCHI), and the New England Chapter of the Human Factors and Ergonomics Society (NEC-HFES) hosted a joint event on January 13 at MIT's Tang Center to kick off a new community service project.

The meeting was fun and energizing. Together, the three groups formed a community, with attendees making new connections and visiting old friends. Members of the three chapters practice the same type of work: the development of usable products. The energy the group created was what the planners had hoped for – a renewed sense of fellowship among people with common beliefs and practices and a warm place to connect and network.

There were two takeaways from the meeting. The first was that the three chapters want to raise public awareness about the importance of human factors and usability engineering in developing products. This important message should not given merely secondary consideration in product development, and all users should learn to expect that the products they buy should be usable.

This point was demonstrated by the first speaker, Beth Loring of the Design & Usability Testing Center at Bentley College,



Bulletin

Volume 47, Number 3

March 2004

The *HFES Bulletin* (ISSN 1527-3660) is published monthly 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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who spoke about her role in a program that aired on ABC's *20/20* that focused on the usability of assembling toys and furniture for the recent holiday gift-giving season. The piece demonstrated how difficult those assembly tasks are and that companies have not been very concerned about that usability aspect of their products. This was a wonderful example of how human factors and usability have been gaining a spotlight.

The second takeaway from the meeting was the way in which the three chapters worked together for a common goal by developing a community service project. The aim of this project, called ErgoBoston.org, is to bring technology to seniors so they can use it in their own communities. This idea strikes close to home, as many of us have parents or other elderly relatives who are learning to use computers, e-mail, and the Internet. Several attendees told stories about the challenges of getting their parents a computer and how long it takes them to be comfortable with it. They were excited to connect with other people in their field who are dealing with this issue.

The second speaker, Richard Pew of BBN Technologies, spoke about a National Research Council report with which he is involved that explores the potential of recent technological advances for improving the lives of the elderly.

The meeting was the first in a series of events that will culminate on May 1, 2004, with volunteers from the three organizations working in teams with seniors groups around Boston. The specifics of the project are being defined, and we look forward to more connections with this new and energizing community. An on-line discussion forum was created on smartgroups.com – to join, please send an e-mail to ergoboston-subscribe@smartgroups.com.

Elizabeth Rosenzweig, a principal scientist at the Eastman Kodak Company, is a member of HFES and codirector of outreach for the Usability Professionals Association. Tony Brown is founder of SoftPlex, Inc.



How To Get NSF Research Funding

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passed by the time you receive this issue of the *HFES Bulletin*, but think about next year. Watch the NSF Web site to see what grants were awarded and start to think about how to establish your own interdisciplinary team to solicit future grants.

The **Innovation & Organizational Change** (IOC) program (<http://www.nsf.gov/sbe/ses/ioc/start.htm>) seeks to improve the performance of industrial, educational, service, health care, governmental, and other organizations and institutions through the support of research on theories, concepts, and methodologies of innovation and organizational change. It is jointly housed in the SBE, Engineering, and Education and Human Resources Directorates. In order to foster innovation and manage change, better understanding is needed of effective approaches to organizational learning and redesign, strategic and cultural change, quality and

process improvement, innovation, new product and service development, and the development and integration of new technologies.

IOC supports research using theory combined with empirical validation to expand the concepts, models, and methodologies of change in organizations and institutions. Proposers should work with partner organizations in industry, education, health care, government, or service. A high priority is to develop valuable research perspectives across disciplinary lines. IOC grants \$75,000 per year – a small sum. But consider this for appropriate projects that could use some additional funding and wouldn't be hurt by having NSF's imprimatur.

How to Write an NSF Grant Proposal

Here is some general advice: First, each NSF program spells out its specific requirements in program announcements. For the programs noted, requirements can be accessed via the foregoing links. Second, bear in mind the bigger picture: NSF values innovative research that advances scientific theory and/or method. It is increasingly focusing on multidisciplinary approaches. And although NSF is known for sponsoring basic research, its mission supports applied research as well. Third, don't be afraid to contact the program officers. They're researchers themselves and are often very approachable.

One of the issues we discussed with NSF staff is their peer review process. Given that human factors psychologists don't traditionally seek funding through NSF, it's no surprise that we are absent from NSF's established reviewer panels, which can be discouraging. But we learned that you can request up to two reviewers when you submit a grant proposal. This may vary by program, so it's worth a call to the program officer. On a grander scale, this is an area where organizations like the APA and HFES can help by submitting formal nominations for review panels.

There is no silver bullet or a precise prescription on how to write a winning proposal, but some general tips are worth noting. Remember that your proposal will be peer reviewed. Therefore, ask yourself, "If I were a reviewer of a grant proposal, what would I look for?" You would probably want to see the theoretical grounding of the proposed study, clearly defined constructs and hypotheses. You want to have a good idea of the methodology that will be used and why the investigators have chosen it. At the end, if the researchers are successful, what will the contribution or payoff be, or what will be new and exciting? The final touch must be good writing.

We think it's worth noting that reviewers of any agency don't see first what area the psychologist writing the grant proposal represents to determine if the work should be funded. What reviewers look for are clear ideas – theoretically based research that advances knowledge. They look for contributions. On that basis, human factors psychologists have received NSF grants on topics like expertise, learning technologies, team effectiveness, and human computer interaction. It's not about who is talking but what you have to say.

Why Get NSF Grants?

Why would a human factors psychologist want to try to secure grant funding from the NSF? The truth is, we can usually get more money – probably more easily – from other federal departments or

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agencies and from private corporations. Because NSF is a significant national source for nonmedical science funding, being active participants in this domain helps raise the prestige of HFES. As HFES members, we claim to be working at the intersection of science and practice, but many other psychologists see us only as practitioners. Being active participants as NSF applicants and reviewers will help bolster our discipline's scientific credentials. In addition, because of our unique position at the science-practice intersection, we have a much better feeling for contextual issues as these relate to building a science on social phenomena.

In applying basic psychological research in applied contexts, one inevitably comes across boundary conditions or other difficulties that relate directly to the theory or principles involved. This often calls for a revision of the basic theories in order to better predict and explain social phenomena in complex domains. This is not just application of psychology; it is direct reformulation and improvement of existing psychological theory, which can serve to advance scientific theory more broadly.

Dianne B. Maranto is director of Psychology in the Workplace for the American Psychological Association. John Hollenbeck is professor of management with the Eli Broad Graduate School of Business at Michigan State University. Eduardo Salas is a professor in the Department of Psychology at the University of Central Florida and the editor of Human Factors. ☒

EID Needs You!

By Melody Carswell, Editor

Thanks to the hard work of everyone on the Editorial Board of *Ergonomics in Design*, and especially to outgoing editor Jeff Kelley, the current year's volume promises to be full of practice-relevant, thought-provoking, educational, and timely articles. Some of the case studies, in my opinion and at the risk of sounding overly evangelical, are inspiring. The diversity and quality of articles in the publication pipeline are impressive.

Of course, the continued success of *EID* depends on the willingness of Society members to become involved – to submit article proposals or full articles, to contribute items for the departments, and to answer the call if we need your help as a reviewer.

I would like to remind readers that, in addition to 2000–3000-word feature articles, we are interested in receiving briefer manuscripts that might be suitable for one of our departments.

Do you have ideas about human factors approaches that are likely to be controversial? Let us consider your ideas for use in our “Provocations” department.

Have you come across references to HF/E in the press? Tell us where and we will include selected quotes in the “In the News” section.

Do you know of colleagues working in nontraditional HF/E settings who would be willing to share their experiences? Are you aware of ethical and professional concerns that have received little coverage? We are resuming publication of the “Professional Issues” department to address these specific topics.

Would you like a short primer on selected physical, physiological, or behavioral principles? Tell us which ones and perhaps you will have set the stage for a future “Laws and Rules” column.

And if you would be willing to review books or software, or if you have specific books or software in mind that you would like to see reviewed, we can arrange that, too.

Please submit your manuscripts or proposals to Assistant Editor Jeremy Loudonback at jeremy@hfes.org or to me at cmcars00@uky.edu. On behalf of the Editorial Board, I look forward to working with you. ☒

Mark your Calendar!

HFES invites you to attend the 48th Annual Meeting, to be held at the Sheraton New Orleans Hotel, New Orleans, Louisiana, September 20–24, 2004. Please go to <http://www.hfes.org/meetings/2004menu.html> for regular updates on the Annual Meeting.

Update on OSHA's NACE

By Carter J. Kerk, NACE Chair

Despite the absence of 11 senior ergonomists, OSHA's National Advisory Committee on Ergonomics (NACE) held a research symposium on January 27, 2004, to present new research on the topics of workplace injury and musculoskeletal disorders.

NACE is on a two-year mission, ending in fall 2004, to advise OSHA in the areas of guidelines, outreach/education, and research. (Note that regulations and enforcement are not part of the charter.) Research is but one piece of the charter, and the research symposium is but one part of the efforts in the area of research.

A portion of the NACE charter is to provide advice to OSHA on identification of gaps in the existing research base related to applying ergonomic principles to the workplace, and current and projected research needs and efforts. NACE has had significant interaction with the National Institute for Occupational Safety and Health (NIOSH), beginning with a presentation from Director John Howard at the first meeting in January 2003. At that time he pledged his support and offered the services of NIOSH Chief of Psychophysiology Thomas Waters. Waters has attended each meeting and interacted closely with the NACE Research Work Group. He presented updates on the National Occupational Research Agenda at the January 2003 and January 2004 meetings.

Each committee member has received copies of the National Academy of Sciences/National Research Council reports. At the September 2003 meeting we received a briefing from David Wegman of the University of Massachusetts-Lowell summarizing a report published by the National Research Council Institute of Medicine's panel on musculoskeletal disorders.

At the second NACE meeting in May 2003, the committee formed three work groups to address the areas of guidelines, outreach/education, and research. At that meeting, the Research Work Group advanced the concept of a research symposium, which was accepted by the committee. At the September 2003 meeting, we approved further development of the symposium plan as recommended by the Research Work Group.

Abstracts were sought that focused on the state of new data-driven scientific research concerning the relationship between the workplace and neurovascular and musculoskeletal disorders. Areas could include definitions and diagnoses, cause and work-relatedness, exposure-response relationships, intervention studies, and study design. Abstracts were solicited through the *Federal Register* and from researchers recommended by the committee.

A total of 39 abstracts were received for review, and feedback was sent to the chair. I selected the 10 best suited and most appropriate for the previously stated criteria. Other excellent abstracts were received but not accepted for inclusion; some of these fell in the categories of literature reviews, older research, or position papers. All submitted abstracts will be considered by the Research Work Group and the committee. All researchers – whether or not they submitted or were accepted – are encouraged to submit research results and recommendations to the committee in the coming months.

I was pleased to receive the letter from the 11 scientists who chose not to submit abstracts for the symposium (see below). I value and appreciate their viewpoints. The opportunity to provide advice to OSHA remains. I encourage HFES members to offer feedback, critical or not, and I thank you for your contributions. To learn more about NACE activities, go to <http://www.osha.gov>, then select the "Ergonomics" link, then the "National Advisory Committee" link.

Carter J. Kerk is chair of the National Advisory Committee on Ergonomics and may be reached at 605/394-6067, carter.kerk@sdsmt.edu.

HF/E Scientists Boycott NACE Symposium

A coalition of 11 ergonomics scientists and researchers from universities around the country signed a boycott letter to the Occupational Safety and Health Administration (OSHA) criticizing the January 27 National Committee on Ergonomics (NACE) symposium. The letter spelled out the group's concerns about the Bush administration's level of commitment to addressing workplace injury and accused it of sacrificing scientific concerns for political reasons.

The boycotting scientists, including organizer David Rempel (University of California, Berkeley), charge the current administration with preventing recognition of existing research that links some working conditions and workplaces to the development of musculoskeletal disorders.

"I joined this boycott," Rempel said, "because NACE and the invitation to the NACE Symposium have not acknowledged the substantial scientific review conducted by the National Academy of Sciences and the Institute of Medicine that was published in 2001.

"The NACE Symposium will rehash questions that have already been exhaustively investigated and resolved, and I fear that the NACE is another tactic engineered by this administration to delay consideration of effective ergonomics regulations," said Rempel, who is director of UC Berkeley's ergonomics program.

Signatories to the letter to OSHA were Don B. Chaffin, University of Michigan; Bradley Evanoff, Washington University School of Medicine; Fredric Gerr, University of Iowa; Monroe Keyserling, University of Michigan; William Marras, Ohio State University; Laura Punnett, University of Massachusetts-Lowell; Robert Radwin, University of Wisconsin-Madison; David Rempel; John Rosecrance, Colorado State University; Barbara Silverstein, Washington State Department of Labor and Industries; and David H. Wegman, University of Massachusetts-Lowell. ☉

Student Professional Development

By Haydee Cuevas

Students join the organizations that represent their field of study for many reasons, but possibly the most important benefit that a society such as HFES can offer its student members is in the area of professional development. The Student Views column will feature a series of articles that promote the professional development of HFES student members. These articles come from the Student Career and Professional Development Day held during the 2003 HFES Annual Meeting, where a diverse group of professionals representing academia and industry participated in a full-day workshop. Topics included entering the academic marketplace (e.g., applying for the job, negotiating entry conditions), securing grant applications, and getting published. We begin the series with advice on how students can maximize the potential of their HFES student membership.

Highly effective HFES students employ “best practices” that they believe will contribute to their professional development. Such activities are not limited to increasing their chances of finding a job after graduate school, although this is an important objective. On a more general level, these students take advantage of opportunities available to them through their membership to enrich both their professional and personal lives. The following seven habits represent only a few of these practices. Highly effective HFES students:

1. Add important lines to their curriculum vitae
2. Refine oral and written communication skills
3. Expand the knowledge base of their chosen field
4. Build a professional network
5. Maximize mentor-mentee interactions
6. Increase internship opportunities
7. Create career opportunities

How can you successfully cultivate these essential habits? One great place to start is by attending the HFES Annual Meeting. Conferences provide students with an appropriate forum in which to present their work to an interested audience and to hear about recent research findings and current trends (Habits 1–3). Students can also interact with their peers and meet prominent professionals in the field, as conferences are an ideal setting for networking and seeking prospective mentors and job or internship opportunities (Habits 4–7). And although attending meetings can be expensive, students can reduce costs by volunteering, and thereby receiving a refund on registration fees, or finding a roommate to reduce hotel costs.

To be truly effective at conferences, however, students need to become actively involved by submitting proposals and attending a

variety of sessions. Each session format (e.g., lectures, posters, and symposia) offers students unique opportunities to develop not only their written and oral communication skills (Habit 2) but also their organizational skills and resourcefulness (useful for Habits 6 and 7). Although students may feel intimidated presenting their ideas before a group of experienced professionals in a lecture or panel session, many of these professionals are eager to hear about students’ research, which they often view as being innovative, fresh, and cutting-edge. Poster sessions and demonstrations provide a more extensive, intimate interaction with the audience.

Students may also wish to attend the special sessions and/or activities geared toward students (e.g., Student Career and Professional Development Day). For example, the Student Reception allows students to meet and interact with peers who may have similar interests and ideas and may someday be their professional colleagues (Habit 4).

By attending the various technical groups’ (TGs) business meetings and receptions, students can capitalize on these informal settings to network among professionals in the field (Habit 4) and explore which TGs to join. Given their low membership fees (\$4 to \$6), TGs are a great value and offer many ways for students to participate (e.g., writing newsletter articles or reviewing proposal submissions – Habits 1–3). TGs also offer access to potential mentors (Habit 5) and information on internship and/or career opportunities (Habits 6 and 7).

Other valuable HFES member resources include the *HFES Bulletin*, *Ergonomics in Design (EID)*, the *Directory and Yearbook*, and the HFES Web site (hfes.org). The *Bulletin* and *EID* communicate current issues and events relevant to the human factors profession and encourage articles from all members – students and professionals alike (Habit 1). The *Directory and Yearbook* serves as a valuable reference tool for information about the Society’s activities, awards, and affiliations (indispensable for Habits 4–7). The Web site offers on-line access to TG Web sites, the member and graduate program directories, and the Career Center, which lists job and internship opportunities in industry, government, and academia (Habits 6 and 7).

If students really wish to become actively involved in the Society’s affairs, they should consider volunteering for an HFES committee. By taking a more active role in the organization that best represents their interests, students can have a significant impact in the decisions that directly affect them. To volunteer, contact the HFES Member Services Department at membership@hfes.org.

Highly effective HFES students are not passive about their future. They wish for their voices to be heard and are not afraid to share their views with others. Yet, these students do not merely identify the issues and problems that concern them – they wish to be part of the solution.

Haydee M. Cuevas is a doctoral candidate in the Applied Experimental and Human Factors Psychology Program at the University of Central Florida. This article is drawn from her 2003 Denver presentation, “7 Habits of Highly Effective HFES Students: Making Your HFES Membership Work for You.” She serves as cochair of the National Ergonomics Month Committee.



CALLS FOR PAPERS

Contributions for Ergo Encyclopedia

Contributions are invited for the second edition of the *International Encyclopedia of Ergonomics and Human Factors*, edited by Waldemar Karwowski (<http://www.louisville.edu/speed/ergonomics/ency2005/>). Articles are invited on contributors' areas of expertise and items (including biographies and black-and-white photographs) about deceased ergonomists or those who retired from active service and who have made outstanding contributions to the field of HF/E.

The submission deadline for all articles is *June 1, 2004*. Requirements may be found at <http://www.louisville.edu/speed/ergonomics/ency2005/>. Please notify Assistant Editor Bodhana Sherehiy (b0sher01@athena.louisville.edu) about any planned or potential contributions as soon as possible. ☒

SHORT COURSES

2004 Advanced Office Ergonomics Certificate Series (May 17–19, 2004, San Diego, CA). Center for Occupational & Environmental Health, University of California, UC Berkeley, Mailcode 5120, 2223 Fulton St., 2nd Floor, Berkeley, CA 94720-5120; 510/643-7277; <http://socrates.berkeley.edu/~coehce/>.

26th Annual Occupational Safety and Health Update (June 24–25, 2004, 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/>.

Putting Ergonomics into Practice (May 18–21, 2004, Columbus, OH). The Ohio State University Ergonomics Short Course, Ohio State University, 1971 Neil Ave., 210 Baker Systems, Columbus, OH 43210; 614/292-4565; fax 614/292-7852; ergonomics@osu.edu, <http://osuergo.eng.ohio-state.edu/Institute/index.htm>. ☒

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.

★ **XVIII Annual International Occupational Ergonomics and Safety Conference 2004**, May 19–22, 2004, Houston, TX. Lawrence J.H. Schulze, OESC 2004 Conference Chair, E206-D3 Engineering Building 2, University of Houston, Houston, TX 77204-4008.

75th Anniversary Meeting (147th Meeting) of the Acoustical Society of America, May 24–28, 2004, New York, NY. Acoustical Society of America, Suite 1NO1, 2 Huntington Quadrangle, Melville, NY 11747-4502; 516/576-2360, fax 516/576-2377; asa@aip.org, http://asa.aip.org/map_meetings.html.

★ **4th Ergodesign: 4th International Congress of Ergonomics and Usability of Human-Technology Interfaces: Products, Programs, Information, Built Environments**, May 25–26, 2004, Rio de Janeiro. Laboratory of Ergonomics and Usability of Interfaces in Humano-Tecnologia Systems; Street Marquis of Is Vicente, 225 - room 715F, Topsail, Rio De Janeiro, Brazil, CEP: 22453-900; (21) 3114-1590, branch 325, fax (21) 3114-1589; leui-puc@rdc.puc-rio.br.

★ **Environmental Design Research Association's 35th Annual Meeting: Design with Spirit**, June 2–6, 2004, Albuquerque, NM. Dwight Miller, program chair; dpmille@sandia.gov, <http://home.telepath.com/~edra/home.html>.

Safety 2004, June 7–10, 2004. ASSE, 33477 Treasury Ctr., Chicago, IL 60694-3400; 847/699-2929, fax 847/768-3434; customerservice@asse.org, <http://www.asse.org>.

★ **Digital Human Modeling for Design and Engineering Symposium**, June 15–17, 2004. Oakland University, Rochester, MI. John R. Miller, 755 W. Big Beaver Rd., Suite 1600, Troy, MI 48084; 218/273-2494, jrmiller@sae.org, www.sae.org/dhmc.

★ **15th Congress of the International Society of Electromyography and Kinesiology**, June 18–21, 2004, Boston, MA. Tina DiBlasi, Neuromuscular Research Center, 19 Deerfield St., 4th Floor, Boston, MA 02215; (617) 353-9757; sroy@bu.edu.

ASNE Day 2004, June 28–30, 2004, Arlington, VA. Megan Sinesiou, American Society of Naval Engineers, 1452 Duke St., Alexandria, VA 22314-3458; 703/836-6727, fax 703/836-7491; msinesiou@navalengineers.org, <http://www.navalengineers.org/Events/Events.html>.

★ **7th International Conference on Work with Computing Systems**, June 29–July 2, 2004, Kuala Lumpur, Malaysia. contact@wwcs2004.org, <http://www.unimas.my/wwcs>.

12th Conference of the New Zealand Ergonomics Society, August 5–6, 2004, Copthorne Manuels, Taupo, New Zealand. NZES Conference 2004, P.O. Box 300 540, Albany, Auckland, New Zealand; www.ergonomics.org.nz; david.tappin@cohf.co.nz.

26th Annual Cognitive Science Conference, August 5–7, 2004, Westin River North Hotel, Chicago, IL. cogsci@cs.northwestern.edu, <http://www.cognitivesciencesociety.org/cogsci.html>.

XXVIII International Congress of Psychology, August 8–13, 2004, Beijing, China. Institute of Psychology, Chinese Academy of Sciences, 10A Datun Rd., Beijing 100101, People's Republic of China; 86 10 6485 5830, fax 86 10 6485 5830; icp2004@psch.ac.cn, <http://www.icp2004.org>.

★ **7th IASTED International Conference on Computers and Advanced Technology in Education – CATE 2004**, August 13–16, 2004, Kauai, HI. <http://www.iasted.com/conferences/2004/hawaii/cate.htm>.

HFES 48th Annual Meeting, September 20–24, 2004, New Orleans, Louisiana. info@hfes.org, <http://www.hfes.org/meetings/2004menu.html>.

★ *Indicates new listing.* ☒

HFES 2004:



48th Annual Meeting of the Human Factors and Ergonomics Society

NEW ORLEANS!

September 20-24, 2004
Sheraton New Orleans Hotel
New Orleans, Louisiana USA

FEATURING:

- ✦ Hands-on workshops
- ✦ 100+ technical sessions covering research and applications on a broad range of human factors/ergonomics areas (samples include aging, cognitive engineering and decision making, medical systems and rehabilitation, surface transportation, and virtual environments)
- ✦ Professional Development session track
- ✦ Student Forum session track
- ✦ Interactive posters and demonstrations
- ✦ Social events
- ✦ HFES Awards ceremony
- ✦ HFES On-Site Job Placement Service
- ✦ Bookmark the HFES Web site, <http://hfes.org>, for regular updates about:
 - ✦ Exhibiting your products and services (March)
 - ✦ Reserving a meeting sponsorship (March)
 - ✦ Registering on line (June)
 - ✦ Viewing the Preliminary Program and creating a personal meeting itinerary (June)
 - ✦ Obtaining hotel reservation information (June)



**Human Factors and
Ergonomics Society**
P.O. Box 1369
Santa Monica, CA 90406-1369 USA
310/394-1811, Fax 310/394-2410
info@hfes.org, <http://hfes.org>

Bulletin

Volume 47, Number 3 March 2004

Communications Director: Lois Smith
Student Views Editor: Melanie Diez
Assistant Editor: Jeremy Loudenback
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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FLASH!

**Nomination ballots were mailed
March 15 and are due April 26.**

**The 2004-2005 Directory
and Yearbook is scheduled
for mailing in late April 2004.**

**Annual Meeting proposal
acceptance/rejection notices
are due to be sent out in early
April 2004.**

**Final proceedings papers
for the Annual Meeting are due
June 2, 2004.**