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Human Factors and the Decade of Behavior

by *Raja Parasuraman*

Some of the best achievements of modern U.S. society, as well as a growing number of its problems, can be attributed to human behavior. That is the premise of the Decade of Behavior, a new initiative to promote the behavioral and social sciences in the United States. The initiative was developed and organized by the American Psychological Association and is being supported by many other professional organizations, including the Human Factors and Ergonomics Society. Three years in the planning, the Decade of Behavior initiative was officially launched in Washington on September 25, 2000, in the historic Cannon Caucus Room of the U.S. Congress on Capitol Hill.

The Decade of Behavior initiative is a long-term public education program with five major themes: health, education, safety, prosperity, and democracy. The launch event was a gala occasion featuring 13 prominent researchers in the behavioral and social sciences, who presented interactive exhibits showcasing research that best exemplified these themes. The audience was an eclectic but enthusiastic gathering of congressional staffers, representatives of federal funding agencies, and other assorted “movers and shakers” from the science and public policy worlds. APA’s Executive Director for Science, Richard McCarty, presided. A few members of Congress were also present, including U.S. Representative Brian Baird (D-Washington), in whose speech emphasis was placed on the tremendous economic gain to the nation of a public policy informed by the best behavioral and social science research.

All five Decade of Behavior themes were represented. I was asked to present research relevant to the safety theme. My exhibit highlighted my work in the area of aviation human factors and its potential contribution to the future development of safe and efficient systems for air transportation. I was the only human factors scientist among the 13 invited participants. This was therefore an excellent opportunity to publicize our field, and I took some pains to do so.

Aided by two Catholic University graduate students (Jacqueline Duley and Ulla Metzger) who have participated in this research, we prepared an exhibit that defined human factors in lay terms, described the problem that we are attacking (how to increase the capacity of the aviation system in response to increased demand for air travel, without compromising safety), and summarized some of our key results. Our exhibit also emphasized that new aviation technologies must be designed with early human factors input if they are to be used effectively and safely. Two large computer monitors in our booth displayed a simplified version of our air traffic control simulator. Visitors could see a simulated display of a radar console with an additional display showing advanced concepts for controller-pilot communication (electronic datalink and electronic flight strips). An additional TV monitor played a videotape illustrating our eye movement recordings of air traffic controllers.

Air travel is expected to double over the next decade. Advanced technologies and new traffic management methods are being implemented to enhance an overloaded aviation system. Our exhibit showed some results from our cockpit and air traffic simulator studies of the performance of pilots and controllers. Such studies indicate that if the anticipated benefits for capacity and safety are to be realized, new computer support tools must be designed that take human factors into account. We demonstrated how free flight, in which pilots will be granted greater freedom in selecting and changing routes, will affect air traffic controllers.

Visitors to our booth enjoyed controlling the simulated air traffic and gained a better understanding of human factors methods and the issues involved in the implementation of free flight and other advanced air traffic management concepts. We believe that most came away with a healthy respect for the skill with which professional air traffic controllers handle large numbers of aircraft in congested airspace.



Pictured from left: Julie Swain (NASA), Kathie Olsen (NASA), Raja Parasuraman (Catholic University), David Liskowsky (NASA), and Ulla Metzger and Jacqueline Duley (Catholic University).

(continued on page 2)

Seeking Proposal Reviewers

Technical reviewers are needed to assist with the evaluation of 45th Annual Meeting proposals. Proposals are due March 19, and the review period extends through mid-April.

If you are interested in serving as a proposal reviewer in a particular Technical Group or for General Sessions, Workshops, or Special Sessions, please contact the appropriate program chair. Program chair contact information is included in the Call for Proposals, which was mailed to members in January and is posted at the HFES Web site (<http://hfes.org>; download page 6, "Where to Submit Your Proposal").

Calling All Exhibitors

HFES invites companies providing publications, products, and services to exhibit at the 45th Annual Meeting in Minneapolis. More than 90% of attendees report visiting the exhibit hall during the meeting, seeking books and standards; hardware and software measurement, modeling, and design tools; and furniture and work aids.

The rate for a 10' x 10' booth is \$2000; \$750 for a tabletop. Coffee break and other sponsorships are available. Corporate sponsorships are welcome for any aspect of annual meeting support. For more details, contact Lois Smith in the HFES central office (310/394-1811, lois@hfes.org). ☒

The results of our research indicate that automation and other technologies that are implemented to cope with the anticipated doubling of air traffic over the next decade must be designed to support rather than supplant these skills. One visitor, NASA Chief Scientist Kathie Olsen (see photo), praised our work and our exhibit's emphasis on the important role of human factors science in aviation. Several others commented that they were surprised and pleased to see that human factors was more than "knobs and dials" and was being applied to important societal problems.

The Decade of Behavior has ambitious goals (visit the Web site at <http://www.decadeofbehavior.org>). As human factors scientists and practitioners, we should support these goals because our field is an important component of the behavioral and social sciences. Will the goals be met? Broad political support will be essential. At the launch event, a letter from former President Clinton recognizing the importance of the behavioral and social sciences was read by Representative David Price (D-North Carolina). Clinton stated in part that "the consequences of untreated behavioral problems are staggering in both human and economic terms.... The behavioral and social sciences offer us invaluable resources in identifying and eliminating the causes of many of these seemingly intractable problems." One can only hope that his successor in the White House agrees.

Raja Parasuraman is professor of Psychology and director of the Cognitive Science Laboratory at the Catholic University of America. His research interests include automation, aviation and air traffic control, aging, vigilance, and workload. ☒

Watch the mail and HFES Web site for registration and program details.

Bulletin

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What You Can Do

My colleagues and I were very pleased to have Dr. Parasuraman and his students play a key role in the Decade of Behavior launch event. His research exhibit was highly interactive and provided clear evidence to the many guests that human factors researchers will play an increasingly important role in our society.

Whether we are addressing air traffic control, medical device error, or ground traffic safety, the study of human factors is key. Part of what we hope the Decade of Behavior initiative accomplishes is to encourage behavioral scientists to think about how they can communicate to laypersons the relevance of their research to the quality of life in our society. Dr. Parasuraman certainly set an excellent example of this.

We are delighted that the Human Factors and Ergonomics Society is involved in the initiative and was represented in such a compelling manner by Dr. Parasuraman. We look forward to working with HFES throughout the Decade initiative.

*Richard McCarty, Executive Director
Decade of Behavior*

Ann M. Bisantz was awarded the National Science Foundation's Faculty Early Career Development award for "Studies of Decision Making in Complex, Dynamic Environments." This four-year award supports junior faculty for an integrated program of research and teaching. Ann is an assistant professor at SUNY Buffalo and may be reached at 342 Bell Hall, Department of Industrial Engineering, University at Buffalo, Amherst, NY 14260; 716/645-2357; bisantz@eng.buffalo.edu.

Joseph S. Dumas has joined Oracle Corporation in Waltham, Massachusetts. He can be reached at 781/684-7745 or via e-mail at joe.dumas@oracle.com.

Peter A. Hancock has left the Human Factors Research Laboratory at the University of Minnesota to take a position as Provost Distinguished Research Professor in the Department of Psychology, University of Central Florida. He can be reached at 407/823-2310 or via e-mail at phancock@pegasus.cc.ucf.edu.

Marc W. Hunter was promoted to vice president of research and design at Metaphase Design Group. Marc may be reached at 314/721-0700 or via e-mail at marc@metaphase.com.

James Wilson, a member of HFES for 19 years, died in Coral Springs, Florida, on October 12, 2000, after courageously battling cancer. Jim had a distinguished career in human factors. After receiving his Ph.D. in experimental psychology from Pennsylvania State University, he joined Eastman Kodak in 1985, where he designed user interfaces for office equipment and established usability testing for Kodak. Jim championed the integration of human factors and industrial design and chaired the Interface '87 Conference, a meeting designed to bring together these two disciplines. Jim also generously mentored human factors students from the University of Rochester. In 1993, he joined Motorola in Plantation, Florida, and developed a new human factors group. Jim proceeded to institutionalize human factors at Motorola and built the company's first usability lab. As a human factors researcher and scientist, Jim had a keen interest in fighting for the users' point of view and championed "making the right product right."

— Brian Philips, Philip Hodgson, Jari Järvinen, & Moin Rahman

Sandra L. Newsome, a principal usability engineer in Oracle's usability and interface design group, died on November 20, 2000. Sandra received M.A and Ph.D. degrees in engineering psychology from New Mexico State University in 1978 and 1981, respectively. She was an assistant professor in the Psychology Department at Rensselaer Polytechnic Institute in Troy, New York, from 1981 to 1988. Sandra later became an advisory human factors engineer at IBM in Tucson, Arizona, where she remained until 1995. She was a senior user interface designer at Xerox Corporation in El Segundo, California, from 1995 to 1997, after which she joined Citibank. In 1999, she joined Oracle as an expert in usability of business applications software, including banking, finance, and electronic commerce. Sandra was program chair-elect of the HFES Communications Technical Group and past chair of the Los Angeles Chapter of ACM SIGCHI. She also mentored many HFES colleagues. Sandra is survived by her companion, Dennis McTeague, and her sister, Sharon.

— Anna M. Wichansky

CHAPTERS

SUNY Buffalo Miniconference

by Gordon J. Gattie

HFES SUNY Buffalo Student Chapter Member

On November 18, 2000, the HFES SUNY Buffalo Chapter hosted a miniconference and open house. During the afternoon, attendees heard research presentations from graduate students, ranging from recently completed student projects to current departmental research. The miniconference consisted of 12 poster presentations, which included equipment and software demonstrations. Guest speaker Suzanne H. Rodgers, a consultant from Rochester, New York, shared her thoughts about the future of ergonomics in "All Other Tasks as Required; Are Our Jobs Still Ergonomically Appropriate?" A total of 34 attendees, including students from the Cornell University Student Chapter, shared research ideas and industry experiences. ☒

NEWS

HF and Medical Device Design Telecon

The Food and Drug Administration will sponsor "Integrating Human Factors Engineering into Medical Device Design and Development," a live satellite teleconference at 1:00 p.m. EST, on February 14, 2001. The teleconference will focus on the role of the medical device industry in reducing errors involving medical device use. In a case study format, a panel of experts will describe how and why medical device manufacturers should integrate human factors engineering into their design processes to address use error and discuss techniques.

For more information, contact Jay Crowley, FDA, 301/594-1161, fax 301/594-0067; jjc@cdrh.fda.gov.

More News on page 4.

IEA/Liberty Mutual Prize

Applications are now being accepted for the 2001 International Ergonomics Association (IEA)/Liberty Mutual Prize in Ergonomics and Occupational Safety. This \$5,000 award recognizes individuals who have made significant contributions to the reduction or prevention of work-related injuries and/or to the advancement of theory, understanding, and development of occupational safety research.

In addition, the award recipient will be eligible for the 2003 Liberty Mutual Medal, to be awarded at the 2003 IEA Triennial Congress in Seoul, Korea. The Medal recognizes the best of three Liberty Mutual Prize awardees from the previous three years and consists of a medal and a \$15,000 stipend.

Candidates for the Liberty Mutual Prize must submit a letter of application and an original, previously unpublished research paper relevant to the field of occupational safety and ergonomics, in electronic format, by *March 15, 2001*. An international review committee will select the winning contribution. The prize will be presented at an IEA-sponsored conference or a conference in the country of the recipient. For more information, contact Y. Ian Noy, IEA Awards Chair, % Transport Canada, 330 Sparks Street, Tower C, Ottawa, Ontario, Canada, K1A 0N5; 613/998-2268, fax 613/998-4831; noyi@tc.gc.ca. Applicants will be notified by mid-June.

Assessing WMSDs

The Quick Exposure Check (QEC) was developed by Guangyan Li and Peter Buckle at the University of Surrey as the result of a research project aimed at creating a practical, user-friendly method for assessing exposure to physical risks for work-related musculoskeletal disorders (WMSDs).

The QEC tool consists of a checklist for the assessor and worker, an exposure score table, and a user guide. This tool enables the assessor to identify risk factors for WMSDs, evaluate risk exposure levels for different body regions, suggest actions that need to be taken in order to reduce the risk exposure, evaluate the effectiveness of an ergonomics intervention in the workplace, and educate users about the musculoskeletal risks in their workplace. For more information, visit <http://www.sunderland.ac.uk/~tssogli/QEC.html> or <http://www.geocities.com/qecuk/> for a free download.

International Master's Programs

Applications are being accepted for the International Master's Programs at the Institute of Technology at Linköpings Universitet, Sweden. Four programs are offered: communication and interactivity, which features courses in telecommunication theory and human-computer interaction; manufacturing management, which focuses on product and process technology and operations management; materials physics, which features courses in elec-

tronic materials and devices; and traffic environment and safety management, which includes courses in human factors in road safety and driving simulation and accident investigation. The courses are taught in English, and there are no tuition fees. For details, contact Ms. Anja Norlund, International Exchange Coordinator, Linköpings Universitet, anjno@tfk.liu.se, <http://www.lith.liu.se/en/master>.

Safety and Health Grant

The American Society of Safety Engineers and the American Industrial Hygiene Foundation have combined efforts to create a \$12,000 grant that will be awarded to a safety and health researcher(s) exploring the issue of "Developing Future Safety Cultures in Industry." The goal is to enhance the occupational safety and health performance of managers, supervisors, and employees.

Applications are now being accepted by both organizations. The document should include a proven history of effectiveness, measurability of results, efficient use of resources, and a well-defined target population, and the work should easily be transferred to other work environments. Deadline for application is *March 1, 2001*. For more information, contact Mary Goranson, ASSE, 1800 E. Oakton St., Des Plaines, IL 60018; 847/699-2929; <http://www.asse.org/foundat.htm> or <http://www.aiha.org/found.html>.

Transportation Management MBA

Dowling College announces a new MBA program in Intermodal Transportation Management. The program prepares students to excel in both private and public transportation, to impact the way transportation business is being conducted, to apply proven solutions to complex problems, and to assume leadership in the industry. Course topics include transportation system safety, transportation workplace safety, and transportation system design that considers the human factors aspects related to transportation vehicle design and operation. Human factors is considered an integral component of the program, and key faculty members have human factors backgrounds. For more information, contact Carl Berkowitz, 631/244-3261; berkovic@dowling.edu, <http://www.dowling.edu>.

New International Journal

Original research submissions are invited for *Universal Access in the Information Society*, which begins publication this month. This interdisciplinary refereed journal addresses the accessibility, usability, and acceptability of information society technology. Contact Alfred Hofmann, Executive Editor, Computer Science Editorial III, Springer-Verlag, Tiergartenstrasse 17, D-69121 Heidelberg, Germany; +49 6221 487 599, fax +49 6221 487 588; hofmann@springer.de, <http://www.springer.de/journals/uais/>. ☉

Cognitive Modeling

Submissions are welcome for the 4th International Conference on Cognitive Modeling, ICCM-2001, to be held in Fairfax, Virginia, July 26–28, 2001. The goal of ICCM-2001 is to bring researchers from diverse backgrounds together to compare cognitive models, to evaluate models using human data, and to further the development, accumulation, and integration of cognitive theory. Submissions are due *March 1, 2001*. Contact Wayne Gray, Program Director, George Mason University, ARCH Lab/HFAC Program, MSN 3f5, Fairfax, VA 22030-4444; 703/993-1357, fax 703/993-1330; gray@gmu.edu; <http://hfac.gmu.edu/iccm/>.

CIC-9

Abstracts are invited for the ninth Color Imaging Conference, to be held November 5–9, 2001, in Scottsdale, Arizona. Areas of interest include color engineering, color and computer graphics, color in software and hardware development, and psychophysics concerning human color vision. Submissions are due *April 1, 2001*. Electronic submissions are strongly encouraged. Contact the Society for Imaging Science and Technology, 7003 Kilworth Lane, Springfield, VA 22151; 703/642-9090, fax 703/642-9094; info@imaging.org; <http://www.imaging.org>.

Work in the Global Village

Abstracts are invited for Work in the Global Village: An International High-Level Conference on Work Life in the 21st Century, to be held October 15–17, 2001, in Helsinki, Finland. The conference includes discussion of the global values and ethics in occupational safety and health as a dimension of decent work. Abstracts are due *April 15, 2001*. Contact Conference Secretariat, Ms. Taina Pääkkönen, Finnish Institute of Occupational Health, Topeliuksenkatu 41 a A, FIN-00250 Helsinki, Finland; +358 9 4747 2910, fax +358 9 2413 804; taina.paakkonen@occuphealth.fi; <http://www.occuphealth.fi/e/project/globalwork/>.

CAES 2001

Proposals are invited for the International Conference on Computer-Aided Ergonomics and Safety, to be held July 29–August 1 at the Outrigger Wailea Resort in Maui, Hawaii. The objectives are to facilitate the exchange of information about recent advances in computer-aided methods, techniques, and tools for human factors/ergonomics, safety, and health applications. Areas of interest (26 in total) include virtual technology, telecommunication, office ergonomics, hand tool design, medical applications, and cognitive modeling. Electronic abstracts are due *March 15, 2001*. Contact Biman Das, Dept. of Industrial Engineering, Dalhousie University, Halifax, Nova Scotia B3J 1B6 Canada; +902/420-3286, fax +902/420-7858, biman.das@dal.ca. ☉

- ★ **Designing Our Future: Joint Conference of the American Society on Aging and the National Council on the Aging**, March 8–11, 2001, New Orleans, LA. American Society on Aging, 833 Market St., Suite 511, San Francisco, CA 94103; info@asaging.org; <http://www.asaging.org>.
- ★ **Advanced Technology Electronic Defense Systems Conference and the Tactical Situational Awareness Symposium and Exhibition**, March 13–15, 2001, San Diego, CA. Peggy Heffner, Naval Aviation Systems Team (Code 4.6.4.2.), Bldg. 2187, Suite 2280, 48110 Shaw Rd., Patuxent River, MD 20670-1906; 301/342-9268, fax 301/342-9305; heffnerpl@navair.navy.mil.
- ★ **Information Science Innovations 2001: Tutorial on Effective Anthropometry**, March 17–21, 2001, Dubai. Kathleen Robinette, Air Force Research Lab, HECF, 2255 H St., Room 3003, Wright Patterson AFB, OH 45433-6573; 937/255-8810, fax 937-255-8752; kath.robinette@he.wpafb.af.mil; <http://www.icsc.ab.ca/160-tut.htm>.
- ★ **Work Congress 5: 5th International Congress on Work Injuries, Prevention, Rehabilitation and Compensation**, March 18–21, 2001, Adelaide, Australia. Kim Tolotta, Project Manager, WorkCover Corp., Level 1, 100 Weymouth St., Adelaide, S. Australia, 5000; +61 8 8233 2173, fax +61 8 8233 2000; ktolotta@workcover.sa.gov.au; <http://www.workcongress5.org>.
- ★ **16th Annual Conference on Technology and Persons with Disabilities**, March 19–24, 2001, Los Angeles, CA. Center on Disabilities, California State University, Northridge, 18111 Nordhoff St., Bldg. 11, Suite 103, Northridge, CA 91330-8340; 818/677-2578, fax 818/677-4929; ctrdis@csun.edu; <http://www.csun.edu/cod/>.
- ★ **International Conference on Applications of Human Performance in Health and Disability**, March 26–29, 2001, Cairo, Egypt. Continuing Medical Education Office, University of Cincinnati, P.O. Box 670567, Cincinnati, OH 45267-0567; 800/207-9399; <http://www.med.uc.edu/meded/continuing/egypt/>.
- ★ **Include: Innovation through Inclusive Design and Communication**, April 18–20, 2001, London, UK. Patrick W. Jordan, The Royal College of Art, fax +44 20 7590 4244; include@rca.ac.uk; <http://www.hhrc.rca.ac.uk/include>.
- ★ **ASMA 2001**, May 6–9, 2001, Reno, NV. Aerospace Medical Association, 320 S. Henry St., Alexandria, VA 22314-3579; 709/739-2240, fax 703/739-9652; <http://www.asma.org>.
- ★ **4th German Online Research Conference**, May 17–18, 2001, Goettingen, Germany. Margarete Boos, Georg-August University Goettingen, Georg-Elias-Mueller Institute for Psychology, Gosslerstr. 14, D-37073 Goettingen, Germany; +49 551 39 4705, fax +49 551 39 7959; gor2001@uni-goettingen.de; <http://www.psych.uni-goettingen.de/abt/6/>.
- ★ **2001 SEG D Annual Conference and Expo**, May 30–June 2, 2001, Miami Beach, FL. Society for Environmental Graphic Design, 401 F Street NW, Suite 333, Washington, DC 20001; 202/638-5555; <http://www.segd.org>.
- ★ **SID 2001**, June 3–8, 2001, San Jose, CA. Society for Information Display, % Palisades Institute for Research Services, Inc., 411 Lafayette St., 2nd Floor, New York, NY 10003; 212/460-8090, fax 212/460-5460; wklein@palisades.org; <http://www.sid.org>.
- ★ **7th Annual Conference on Human Factors and the Web**, June 4–6, 2001, Madison, WI. Katy Lehman, Conference Administrator, Optavia Corp., 613 Williamson St., Suite 204, Madison, WI 53703-3543; 608/260-9000, fax 608/260-9909; <http://www.optavia.com>.
- ★ **Intelligent Transportation Society of America's 11th Annual Meeting and Exposition**, June 4–7, 2001, Miami Beach, FL. ITS

(continued on page 6)

America, 400 Virginia Ave., S.W., Suite 800, Washington, DC 20024-2730; 202/484-4847, fax 202/484-3483; <http://www.itsa.org>.

★ **15th Annual International Occupational Ergonomics & Safety Conference**, June 4–7, 2001, Fairfax, VA. ISOES, 1503 Inlet Court, Reston, VA 20190; 703/689-9619, fax 703/689-9637; isoes@biz-comm.com; <http://isoes.org>.

★ **141st Meeting of the Acoustical Society of America**, June 4–8, 2001, Chicago, IL. ASA, Suite 1NO1, 2 Huntington Quadrangle, Melville, NY 11747-4502; 516/576-2360, fax 516/576-2377; <http://www.asa.aip.org>.

★ **International Conference on Exposure Assessment in Epidemiology and Practice**, June 10–13, 2001, Göteborg, Sweden. X2001 Dept. of Occupational Medicine, St. Sigfridsgatan 85, SE-412 66 Göteborg, Sweden; +46 31 335 48 90, fax +46 31 40 97 28; X2001@ymk.gu.se, <http://www.ymk.gu.se>.

★ **AIC Color 01**, June 24–29, Rochester, NY. International Color Association Secretariat, 11491 Sunset Hills Rd., Reston, VA 20190; 703/318-0263, fax 703/318-0514; iscc@compuserve.com, <http://www.iscc.org/aic2001>.

★ **Digital Human Modeling for Design & Engineering Conference**, June 26–28, 2001, Arlington, VA. Society of Automotive Engineers, 724/772-7131, fax 724/776-0002; meetings@sae.org, <http://www.sae.org/dhmc>.

★ **17th World Congress of the International Association of Gerontology**, July 1–6, 2001, Vancouver, Canada. Congress Secretariat, Gerontology Research Centre at Simon Fraser University, 2800-515 W. Hastings St., Vancouver, BC, Canada V6B 5K3; 604/291-5062, fax 604/291-5066; iag_congress@sfu.ca, <http://www.harbour.sfu.ca/iag/>.

★ **EDRA 2001**, July 3–6, 2001, Edinburgh, Scotland. The Environmental Design Research Association, Business Office, P.O. Box 7146, Edmond, OK 73083-7146; 405/330-4863, fax 405/330-4150; edra@telepath.com, <http://www.telepath.com/edra/home/html>.

★ **10th New Zealand Ergonomics Society Conference**, July 26–27, 2001, Rotorua, New Zealand. Tim Bentley, Conference Organizer, NZES Conference 2001, COHFE, Private Bag 3020, Rotorua, New Zealand; tim.bentley@forestresearch.co.nz.

★ **Fourth International Conference on Cognitive Modeling**, July 26–28, 2001, Fairfax, VA. Wayne D. Gray, George Mason University, ARCH Lab/HFAC Program, MSN 3f5, Fairfax, VA 22030-4444; 703/993-1357, fax 703/993-1330; gray@gmu.edu, <http://hfac.gmu.edu/iccm/>.

★ **CAES 2001: International Conference on Computer-Aided Ergonomics and Safety**, July 28–August 2, 2001, Maui, HI. Waldemar Karwowski, Center for Industrial Ergonomics, Academic Bldg., Room 445, University of Louisville, Louisville, KY 40292; 502/852-7173, fax 502/852-7397; karwowski@louisville.edu, <http://www.ergonet.net/caes2001.html>.

★ **HCI 2001: Ninth International Conference on Human-Computer Interaction**, August 5–10, 2001, New Orleans, LA. Gavriel Salvendy, General Chair, Grissom Hall, School of Industrial Engineering, Purdue University, West Lafayette, IN 47907-1287; salvendy@ecn.purdue.edu, <http://hcie2001.engr.wisc.edu>.

★ **9th International Vision in Vehicles Conference**, August 19–22, 2001, Brisbane, Australia. Conference Secretariat, VIV9, Institute of Behavioural Sciences, University of Derby, Kingsway House, Kingsway, Derby DE22 3HL, U.K.; +44 1332 593131; ibs@derby.ac.uk, <http://ibs.derby.ac.uk/viv9/>.

★ **45th Annual Meeting of the Human Factors and Ergonomics Society**, October 8–12, 2001, Minneapolis, MN. Hosted by the Upper Midwest Chapter. HFES, P.O. Box 1369, Santa Monica, CA 90406-1369; 310/394-1811, fax 310/394-2410; lois@hfes.org, <http://hfes.org>.



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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!

PLEASE NOTE:

**March 30
Awards Nominations Due**

**ANNUAL MEETING DATES
TO REMEMBER:**

**March 19
45th Annual Meeting
Proposals Due**

**May 18
Accept/Reject Decisions Sent**



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and
Ergonomics
Society**

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