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## ISO Ergonomics Standards Update

*By James R. Williams, Chair, U.S. TAGs to ISO TC159/SC1 and SC4*

The purpose of this article is to describe the work of two of the subcommittees of the International Organization for Standardization (ISO) Technical Committee on Ergonomics (TC159) and the activities of the associated U.S. Technical Advisory Groups (TAGs). As TAG administrator for ISO/TC159, the Human Factors and Ergonomics Society is charged with providing the American National Standards Institute (ANSI) with the U.S. vote and comments for the standards being developed by TC159 and its subcommittees. These votes and comments are prepared by the HFES-administered committee/subcommittee TAGs. This article covers ISO TC159/SC1 (Ergonomic Guiding Principles) and ISO TC159/SC4 (Ergonomics of Human-System Interaction) and concludes with a call for participation.

### U.S. TAGs to ISO/TC159/SC1 and SC4

It is important that the U.S. position on standards proposals be based on input from both individuals and organizations representing various U.S. interests in the area being standardized. ANSI requires that TAGs provide the opportunity for all affected parties to be represented. Also, TAGs are responsible for recommending U.S. experts to ANSI for membership in working groups and arranging and coordinating subcommittee and working group meetings that take place in the United States.

Currently, both the SC1 and SC4 TAG have one physical meeting each year in conjunction with the HFES Annual Meeting and a teleconferencing meeting. The distribution of all documents, as well as voting and commenting on standards, is done by e-mail.

### ISO TC159/SC1

SC1 is charged with producing general standards that apply across various ergonomics subject areas. The U.S. TAG to TC159/SC1 was formed only last year because of concerns about potential overlaps between some of the standards being produced by SC1 and other standards (particularly standards developed by SC4). In fact, many of the members of the SC1 TAG are also members of the SC4 TAG.

TC159/SC4 has the following working groups:

- **WG1** – Principles of the Design of Work Systems (Revision of ISO 6385)

- **WG2** – Ergonomic Principles Related to Mental Work (ISO 10075)
- **WG4** – Usability of Everyday Products (ISO 20282)

The SC1 TAG recently reviewed the FDIS 10075-3 (Ergonomic Principles Related to Mental Workload, Part 3: “Methods for Measuring and Assessing”). Two other standards are being processed in SC1 and are being reviewed by the TAG: ISO/DIS 20282-1 (Ease of Operation of Everyday Products, Part 1: “Context of Use and User Characteristics”) and ISO/CD 20282-2 (Part 2: “Test Methods”).

### ISO TC159/SC4

The subcommittee for standards concerning the ergonomics of human-system interaction (SC4) was formed in 1984 with the initial charter to develop standards in the area of ergonomics requirements for office work with visual display terminals. However, SC4’s charter was expanded to include all areas of human-system interaction.

The standards being produced by SC4 are particularly important because the European economic community’s standards organization (CEN) is adopting these standards as CEN standards. This process, based on the Geneva Agreement, requires that CEN members vote concurrently with ISO members on draft international standards developed by TC159. Because many European countries require that products conform to standards before they can be used in the workplace, it is likely that U.S. products will need to meet CEN standards to successfully compete in the European market. Therefore, it is very important that the U.S. TAG carefully review all these ergonomics standards to ensure that they are based on firm technical grounds and that they will not put U.S. firms at a disadvantage.

The multipart ISO 9241 standard (Ergonomic Requirements for Office Work with Visual Display Devices - VDTs) was the primary standard series developed by SC4. Part 1 is the introduction to the standard; part 2 provides guidance on task requirements; Parts 3, 4, 7, 8, and 9 concern hardware; Parts 5 and 6 concern workstation layout and environment; and Parts 10 through 17 pertain to software.

A number of additional standards developed by SC4 were not part of the 9241 series: for example, ISO 13406 (Ergonomic

*continued on page 2*

## ISO Ergonomics Standards Update

(continued from page 1)

Requirements for the Use of Flat Panels), ISO 13407 (Human-Centered Design Process for Interactive Systems), and ISO 14915 (Ergonomic Requirements for Multimedia). In addition, SC4 is responsible for the ISO 11064 series, Ergonomic Requirements for Control Centers.

Several additional SC4 standards were developed originally by CEN standards groups and then circulated to ISO and CEN members for dual voting. These standards include ISO 9355 (Ergonomic Requirements for the Design of Displays and Control Actuators) and the revision of ISO 1503 (Geometrical Orientation and Direction of Movements). However, the new revision to ISO 1503 is now being done within SC4/WG1.

TC159/SC4 has the following working groups:

- **WG1** – Fundamentals of Controls and Signaling Methods, (currently working on the revision to ISO 1503).
- **WG2** – Visual Display Requirements (developed ISO 9241, Parts 3, 7, and 8; ISO 13406, Parts 1 and 2, now working on revisions to be included in the 9241-300 series).
- **WG3** – Control, Workplace, and Environment Requirements (developed ISO 9241, Parts 4, 5, 6, and 9, now working on revisions for input device standards that will be in the 9241-400 series).
- **WG5** – Software Ergonomics and Human-Computer Dialogues (developed ISO 9241, Parts 10 through 17 and ISO 14915, Parts 1 through 3). WG5 is completing the revision of Part 10, “Dialogue Principles” (now ISO 9241-110) and is working on ISO 23973 (“WWW User Interfaces”) and ISO 9241-171 (“Software Accessibility”).
- **WG6** – Human-Centered Design Processes (developed ISO 13407 and a number of technical reports concerning human-centered design development and assessment). WG6 is working on ISO 9241-20 (Accessibility Guideline for Communication Equipment and Services).
- **WG8** – Ergonomic Requirements for Control Rooms (ISO 11064, Parts 1–7).

## How to Get Involved

Because the SC1 TAG is relatively new, there are only six members, and we welcome additional members. Before the economic downturn, the SC4 TAG had approximately 25 members representing computer manufacturing, telecommunications, government organizations, software development organizations, the insurance industry, universities, aerospace companies, biomedical companies, and furniture manufacturing. However, there are only about 12 members of the SC4 TAG, and we would like to increase this number to ensure full representation of U.S. interests in this important area of human-system interaction standards.

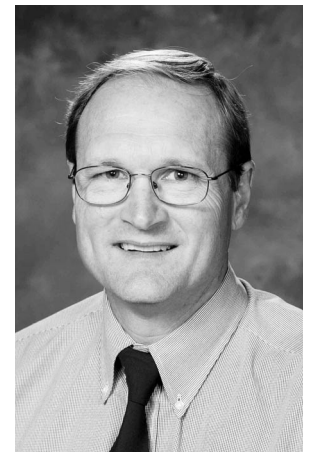
In addition, we do not have U.S. experts participating in any of the SC1 working groups and have limited participation in SC4’s working groups 1, 3, 5, and 8. The content of the standards being developed is based primarily on expert contributions within the working groups, so it is critical that the United States provide as many experts as possible.

To be nominated as an expert to a working group, a candidate must provide evidence of expertise in the subject area and indicate that funding is available to travel to working group meetings. Expert nominations are voted on by the TAG membership, and those approved are forwarded to ANSI for submittal to ISO.

Please direct any inquiries about the U.S. TAG to ISO/TC159/SC1 or SC4 to James R. Williams or Lynn Strother, c/o HFES, U.S. TAG Administrator to ISO/TC159, P.O. Box 1369, Santa Monica, CA 90406-1369. ☒

## ANNUAL MEETING

### Disney Safety Director to Present Keynote



Orlando’s theme parks are popular tourist destinations, but they can also offer valuable human factors/ergonomics lessons, according to this year’s annual meeting keynote speaker. Emmett Peter, Walt Disney Parks and Resorts’ director of global safety, will speak about his 20 years of experience

working to make theme park attractions safe. Peter will present “Human Factors, Ergonomics, and Safety at Disney” at the Tuesday morning plenary session on September 27 at the Loews Royal Pacific Resort at Universal Orlando.

In his presentation, Peter will highlight the myriad interesting human factors issues that arise in the theme park business, in terms of both human performance and safety. Peter will cover a number of topics of general interest, including amusement ride g forces, biometrics, ergonomics of performers, and anthropometry. In the amusement business, these elements are closely linked to the safety of guests and cast and, ultimately, to the enjoyment of the Disney experience.



## Bulletin

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Peter began his Disney career in 1985 in Walt Disney World's Ride and Show Engineering group. From 1985 to 2003, Peter was involved in all aspects of amusement-ride engineering before joining the Safety, Accessibility and Advanced Technology group to focus on ride and attraction safety. Peter is a registered professional engineer in the state of Florida. His education includes a B.S. in engineering technology from Clemson University, a B.S. in mechanical engineering from the University of Central Florida (UCF), and an M.S. in mechanical engineering, also from UCF. Peter is a member of the American Society of Mechanical Engineers, Florida Engineering Society, and American Society of Testing and Materials.

## E&T Committee Usability Workshops

*By Patricia R. DeLucia, Education & Training Committee Chair*

The Education and Training Committee initiates a new series of special workshops at the 49th Annual Meeting in Orlando. The purpose of the series is to provide high-quality training opportunities focused on the primary education and training needs identified by HFES members.

On Monday, September 26, the committee will sponsor two half-day workshops on usability presented by James R. Lewis, who has been a usability practitioner at IBM since 1981 and who wrote a chapter on usability testing that will appear later this year in the third edition of the *Handbook of Human-Computer Interaction*. Individuals with an interest in usability should sign up early for these workshops. For more information on the workshop, please send an e-mail to pat.delucia@ttu.edu.

The morning workshop, "Introduction to Usability Testing," covers the concept of usability, the history of usability testing, various goals of usability testing, and how to run usability tests. Those who would benefit the most from the workshop are people new to the field of usability testing (beginners or other practitioners who have not followed recent research in usability science). In the afternoon, "Advanced Topics in Usability Testing" will cover sample size estimation for usability tests, computation of confidence intervals, and the use of standardized usability questionnaires. This workshop will benefit those who are experienced in the field of usability testing and want to learn about these advanced topics.

In 2003, the committee conducted a survey to assess the education and training needs of HFES members. Based on the results, the committee identified content and skill areas in which members perceived a need for further education and training (complete results can be viewed at <http://www.hfes.org/Web/Membership/Survey.pdf>). Respondents characterized usability as a top training need.

The Education and Training Committee will continue to sponsor a workshop at each HFES annual meeting to address members' needs. Proposals for future workshops in the identified skill and content areas will be solicited (for a partial list, see the De-

ember 2004 issue of the *HFES Bulletin*). Proposals are subject to the normal technical review process.

## Arnold Small Lecture

Daniel L. Schacter, professor of psychology at Harvard University, will deliver the 2005 Arnold Small Lecture at the 49th HFES Annual Meeting in Orlando. Schacter will give his talk, "The Cognitive Neuroscience of Memory: Relations to Human Factors Research," on Wednesday, September 28, at 1:30 p.m.

Schacter's lecture will attempt to bridge the cognitive neuroscience and human factors fields by focusing on recent cognitive neuroscience analyses of memory errors. According to Schacter, memory errors can be divided into seven fundamental categories or "sins": transience, absent-mindedness, blocking, misattribution, suggestibility, bias, and persistence. Schacter will first consider how the seven sins might be related to human factors issues, and then he will focus on recent studies that illuminate neural processes pertinent to understanding several of the sins and consider possible implications of the findings for human factors research.

Schacter received a B.A. in 1974 from the University of North Carolina and M.A. and Ph.D. degrees in psychology from the University of Toronto. His research has focused on psychological and biological aspects of human memory and amnesia, with a particular emphasis on the distinction between conscious and nonconscious forms of memory and, more recently, on brain mechanisms of memory distortion. He has also studied the effects of aging on memory. Schacter's research uses both cognitive testing and brain-imaging techniques such as positron emission tomography and functional magnetic resonance imaging. He has written three books, edited seven volumes, and published more than 200 scientific articles and chapters.

The Arnold Small Lecture Series reflects the systems approaches to safety pioneered by Arnold Small and some of the breadth of his interests. Recent lecturers have included Gary Klein, Joan Claybrook, and Peter Hancock.

## Attend New Brown Bag Sessions

*By Haydee M. Cuevas*

Our profession's growth and continued success can be accomplished only through mentoring the next generation of human factors/ergonomics (HF/E) professionals. Access to role models and mentors is important for our up-and-coming young student professionals as well as early-career professionals and those who may be switching to this field from other careers. To address this critical need, a series of brown bag sessions will be held during this year's HFES Annual Meeting in Orlando to provide students and early-career and transitional professionals with information and opportunities to develop mentoring relationships with established professionals in the HF/E field.

The goal of these dynamic interactive sessions is to allow students and young professionals to freely meet and discuss their

concerns and interests with established professionals in an informal setting. Each invited professional will introduce him/herself and offer brief comments on the topic of mentoring. Professionals will then mingle with members of the audience for one-on-one discussions. The brown bag sessions will be scheduled during the lunch break (12:00–1:30 p.m.) on Tuesday, Wednesday, and Thursday, September 27–29. Different professionals will participate on each day. To date, the following professionals have expressed willingness to participate:

- Anthony D. Andre (Interface Analysis Associates)
- Deborah A. Boehm-Davis (George Mason University)
- Cheryl A. Bolstad (SA Technologies)
- Barrett S. Caldwell (Purdue University)
- Mica R. Endsley (SA Technologies)
- Arthur “Dan” Fisk (Georgia Institute of Technology)
- Michelle M. Robertson (Liberty Mutual Research Institute for Safety)
- Betty M. Sanders (Humanomics, Inc.)
- Ronald G. Shapiro (IBM Corporation)
- Carolyn M. Sommerich (Ohio State University)
- Lynn Strother (HFES Executive Director)
- Carol Stuart-Buttle (Stuart-Buttle Ergonomics)
- Geb W. Thomas (University of Iowa)

This list definitely represents a who’s who of some of the Society’s most respected members. And more names are being added daily to ensure that our invited professionals represent the diversity of our membership, including gender, ethnic diversity, and a broad spectrum of HF/E subdisciplines.

To keep these brown bag sessions intimate and informal, the maximum number of attendees per session will be limited to 25. If you wish to take advantage of this incredible opportunity to interact with some of the top leaders in our field, please RSVP to Haydee M. Cuevas ([haydee.cuevas@satechnologies.com](mailto:haydee.cuevas@satechnologies.com)) by *September 16, 2005*, to reserve your place. Please indicate the specific day you wish to attend: Tuesday, Wednesday, or Thursday. Reservations will be accepted on a first-come, first-served basis, though a waiting list will be established in case of cancellations.

## NEM Session to Feature Outreach Tips

*By Haydee M. Cuevas & Ronald G. Shapiro, NEM Organizers*

The theme for this year’s National Ergonomics Month (NEM) is “A Time For Teaching, Learning, Networking, Service, and Fun!” And what better opportunity to kick off NEM 2005 than at this year’s HFES Annual Meeting in Orlando? All HFES Annual Meeting attendees and their guests are invited to a special 90-minute NEM session scheduled for Monday, September 26,

from 4:45 p.m. to 6:15 p.m., just before the Opening Reception. Several fun and informative activities have been planned for this year’s event.

HFES President-Elect Marvin J. Dainoff will share his vision for NEM 2005. Attendees will learn how to speak to government and political representatives, and the session will also showcase outstanding NEM projects involving schools, community service, and the media. These include presentations highlighting ideas from last year’s NEM Best Action Plan Contest winners (e.g., Virginia Polytechnic Institute and State University and Julia A. Kalish from Purdue University), followed by the presentation of this year’s contest winners. NEM Committee Cochair Haydee Cuevas will also be on hand with special NEM stickers and bookmarks that you can distribute during community events and school visits to promote NEM 2005.

And back by popular demand, Ronald G. Shapiro, Jan Creaser, and Ellen Carpenter will lead several mini-activities from “Games to Explain Human Factors: Come Participate, Have Fun!” throughout the session. The games presentation involves a series of entertaining and informative demonstrations that illustrate that human factors/ergonomics principles and is a great way to have fun and win prizes. And for more chances to win prizes, don’t forget to bring your most creative and innovative ideas for NEM 2005!

*NOTE:* The submission deadline for this year’s NEM Best Action Plan Contest is *August 22, 2005*. For information on how to enter your planned NEM 2005 activities in the contest, contact Haydee M. Cuevas at [haydee.cuevas@satechnologies.com](mailto:haydee.cuevas@satechnologies.com).

## Colloquium Invitation: International HF/E Masters Program

The Professional Standards and Education Standing Committee of the International Ergonomics Association (IEA) has established an Ergonomics Education Subcommittee chaired by Stephen Legg (Massey University, New Zealand). The subcommittee is charged with developing minimum specifications for an international master’s program in human factors/ergonomics. The intent is for these specifications to be presented to the IEA Council in 2006 in connection with the 2006 IEA Congress in Maastricht, Netherlands.

A colloquium on this topic will be held during the HFES 49th Annual Meeting on Friday, September 30, from 8:30 a.m. to noon. Your participation is invited. The colloquium’s objectives are to (a) provide an overview of the Ergonomics Education Subcommittee mission; (b) compare and contrast perspectives from participants on minimum specifications for an international HF/E master’s program, addressing such issues as core courses, elective courses, course contents, credit requirements, practicum requirements, and program duration; (c) enable participants to contribute to the colloquium by outlining their own recommendations on these points; (d) explore the implications of advances in distance education capabilities for supporting HF/E graduate education,

particularly for students in developing countries; and (e) produce a consensus document of recommended specifications based on input provided during the session.

Although IEA has developed a considerable amount of material that can be used in the development of graduate-level HF/E programs, there is no consensus regarding minimum specifications for the structure and content of an international master's degree in HF/E. Moreover, none of the existing IEA material in this area addresses the issue of distance learning in master's-level ergonomics education, even though distance (online) learning represents a highly promising strategy for disseminating graduate-level HF/E education to students in developing countries.

Participants will be expected to (a) familiarize themselves in advance with IEA guidelines pertaining to HF/E education (visit <http://www.iea.cc/> and click on "Core Competencies in Ergonomics" for more information); (b) complete an Ergonomics Education Subcommittee questionnaire that identifies specific issues to be addressed during the colloquium, which will enable participants to express their views on this initiative; (c) take part in general discussion and breakout sessions aimed at developing and delineating these issues; and (d) contribute to a colloquium summary that we hope will represent a consensus view.

To participate in the colloquium, please contact Stephen Legg (s.j.legg@massey.ac.nz) or Thomas Smith (smith293@umn.edu), North American representative to the Ergonomics Education Subcommittee. Those who respond in advance will receive a draft document detailing the current status of the EE Subcommittee deliberations and a copy of the EE Subcommittee's questionnaire.

## HPEE Third Annual Meeting

*By Jason P. Kring, HPEE President*

The Society for Human Performance in Extreme Environments (HPEE) is holding its third annual meeting at the Loews Royal Pacific Resort at Universal Orlando, September 24–25, 2005, immediately preceding the HFES 49th Annual Meeting.

HPEE is an interdisciplinary society for scientists, researchers, operational personnel, and other professionals with interest and expertise in the area of psychology and human performance in complex and high-stress environments. The society seeks to remove the boundaries between scientific and applied disciplines, encourage empirical collaboration and discovery, and provide a forum for a diverse collection of professionals from spaceflight, military operations, underwater and high-altitude environments, extreme sports, and other settings in which humans are not naturally suited to endure.

Scheduled presentations include empirical and theoretical papers, a panel discussion, and invited addresses related to extreme environments or settings possessing extraordinary technological, social, and physical components that require significant human adaptation for successful interaction and performance. In addition, new and current members can join committees devoted to the HPEE journal, the HPEE Web site, and other topics related to the society's future.

We invite you to attend and learn more about HPEE. We are offering a special reduced registration rate for current HFES members. For information on registration, room location, and a detailed meeting agenda, please visit <http://www.hpee.org> or contact the society at [society@hpee.org](mailto:society@hpee.org).

## Training Session Highlight

The Training Technical Group will present a symposium on theoretical and technical advances in simulation-based training at the HFES 49th Annual Meeting in Orlando. "Methods for Assessing and Debriefing Team and Multiteam Performance in Distributed Simulation-Based Training," organized by Paul Ratdke and Joan Johnston (NAVAIR Orlando Training Systems Division), will take place on Tuesday, September 27, from 1:30 p.m. to 3:00 p.m. As part of the Debriefing Distributed Simulation-Based Exercises (DDSBE) program, authors in this symposium will discuss learning and training technologies, including the use of narrative to support debriefing distributed teams and automated-assessment and diagnoses tools. The effort takes a principled human-systems integration approach to designing distributed training technologies. By linking the psychological and computational sciences with the study of learning in high-performance teams, this effort moves human-systems integration research into the forefront of defense-critical needs for the 21st century warfighter.

From a theoretical perspective, the overarching goal of this line of research is to develop the type of training framework necessary for performance evaluation and debriefing when multiple distributed teams are involved in a simulation. From a practical perspective, the DDSBE program allows teams to train using their own simulators and platforms yet still interact on a broader scale, thus supporting the development of distributed team coordination skills. The longer-term goal is to realize significant cost savings by replacing the need to rely upon only live exercises for training. Supporting the growing area of training research involving distributed, multiteam simulation environments, this session will describe how theoretically grounded research and development can be brought together to enable a better understanding of the military's team training needs.

## Donate Books at the Annual Meeting

Have you ever thought about donating to the HFES International Book Drive? Have you been discouraged by packing and shipping your books to the Book Drive at UCF? Maybe you only have one or two books that you would like to donate. Maybe you donated most of your books in previous years but recently came across some that were overlooked. Maybe you have written a book and have some extra copies you might be willing to part with. Whatever the reasons you might not have donated in the past, this year we are making it simple for you. Having the 49th Annual Meeting right here in Orlando allows the HFES University of

Central Florida Student Chapter to collect books from you in person!

A book donation box will be set up at the annual meeting this year. The location of the box will be advertised in the on-site annual meeting newsletter, *The Scoop*. This is an excellent, one-of-a-kind opportunity to donate books without the hassle of shipping. All donations are welcome.

If you have any questions regarding donations in general, or specifically related to the upcoming HFES Annual Meeting in Orlando, please contact Mike Curtis at 407/921-3561 or e-mail at [m\\_curtis@earthlink.net](mailto:m_curtis@earthlink.net). Curtis will also be available for questions at the donation box during the meeting; all dates and times are to be determined. ☒

## MEMBER BENEFITS

### Reduced Rates on IEA Journals

HFES members are entitled to a reduced subscription rate for all journals endorsed by the International Ergonomics Association: *Ergonomics* (the official journal of IEA), *Applied Ergonomics*, *International Journal of Occupational Safety and Ergonomics*, *International Journal of Industrial Ergonomics*, *Human Factors and Ergonomics in Manufacturing*, *Theoretical Issues in Ergonomic Science*, *International Journal of Human-Computer Interaction*, *Ergonomia*, and *Cognition, Technology & Work*. Information about each journal, including how to subscribe, may be found on the IEA Web site at <http://www.iea.cc>. Click on "IEA Endorsed Journals."

### Innovation Discount Offer

*Innovation*, the quarterly journal of industrial design published by the Industrial Designers Society of America, is now available to HFES members at 30% off the regular \$50 subscription price, or \$35. The journal features product highlights, design stars, design crimes, design history, the state of the art, technology, and viewpoints. More details may be viewed at <http://www.innovationjournal.org>.

*Innovation* is published quarterly. Topics include interface and interaction design, design methods and processes, materials and manufacturing processes, universal and ecologically responsible design, user research, transportation design, and education.

A subscription includes the *Yearbook of Industrial Design Excellence*, a large, full-color issue featuring the winners of the Industrial Design Excellence Awards that is published each fall.

To subscribe, please contact Donna Prince at 703/707-6000, [donnap@idsa.org](mailto:donnap@idsa.org). Be sure to provide your five-digit HFES membership ID number, found on the mailing label of your copies of the *HFES Bulletin* and *Ergonomics in Design*. This offer is available through December 31, 2005, and is not valid for current *Innovation* subscribers. ☒

## Training TG Student Grant Program

The HFES Training Technical Group (TTG) has created a student grant program to support student research in training theory and training experimentation. The primary purpose of the program is to support the professional development of our student affiliates. Toward this end, the program is designed to foster the growth of a set of targeted competencies required by the professional scientist interested in training. A secondary goal of the program serves the long-term interests of the TTG by providing another opportunity for our student affiliates to gain recognition of their work while in graduate school. In sum, this program provides an important opportunity for our affiliates to gain recognition for their efforts, thus strengthening the long-term viability of the field.

The program is open to all HFES student members. We offer financial support for research expenses including, but not limited to, purchase of research materials, payment of subjects, and partial payment for equipment. Each year we will offer one award of \$750. Proposals will be evaluated on the following criteria:

- Clarity in presentation of ideas
- Clarity of research methods and methodology appropriateness
- Likelihood of the project to explain some psychological phenomenon
- Ability of the project to advance research in a specified area
- Budget match for scope and requirements of the research

To be eligible for consideration, proposals must be submitted by Friday, *September 2, 2005*. A detailed call for proposals with submittal instructions may be found at the HFES TTG Web site, <http://ttg.hfes.org>. For more information, please contact Steve Fiore at [sfiore@ist.ucf.edu](mailto:sfiore@ist.ucf.edu). ☒

## HUMAN FACTORS

### How to Access *Human Factors* Online

If you are one of the hundreds of HFES members who opted for online access to *Human Factors*, please note that you will need to register at the IngentaConnect Web site to begin viewing papers. Please go to the following site: <http://www.ingentaconnect.com>.

At this site you will be asked to complete a simple registration form by clicking on the "Need to register? Sign up here" link. Then HFES can turn on access for you. Please follow these steps to register for access:

1. Enter your information in the contact information fields.
2. Choose any username and password.
3. Click "Register."
4. Select "Personal subscriptions" and click the "Add" tab at the top of the page.

5. Search for *Human Factors* in the list of available publications. Enter a check mark next to the journal title *Human Factors*, type in your password (called "subscription ID") in the box in the right margin, and then click "Add." A message will appear on the Personal Subscriptions page that your subscription activation request has been received by HFES, where access will be turned on within 1–2 business days. Ingenta will also send you a confirmation message via e-mail that your registration was completed, and another e-mail when access has been set up.

6. IMPORTANT: please be sure that your spam filter permits the confirmation message from ingentaconnect.com to come through.

Please don't hesitate to contact Lois Smith at HFES (lois@hfes.org, 310/394-1811) if you have any questions. ☒

bcpe.org, or join us at the BCPE Reception at the 49th HFES Annual Meeting in Orlando. ☒

## CHAPTERS

# HFES Europe Chapter Annual Meeting

*By Antonella Toffetti & Dick de Waard, Annual Meeting Organizers*

The HFES Europe Chapter will hold its 2005 Annual Meeting on October 26–28 at the Centro Ricerche Fiat (CRF) in Orbassano, Italy (near Turin). The theme of this year's meeting is "Human Factors in Industrial and Consumer Products and Services." The keynote speaker will be Walter Gerbino of the University of Trieste in Italy, and sessions will be organized around user-centered design, intelligent agents and simulation, surface transportation, aviation and space, Web and e-learning, and human factors: the consumer and services. The conference also features a special session, "Human System Integration Across Various Domains of Industry, Government, and Academia." More information about the HFES Europe Chapter Annual Meeting may be found at <http://conference.hfes-europe.org>.

A proceedings book will be published after the meeting. As in previous years, not only will editors review all papers, but all paper submissions will be sent out to experts for external review.

The European Office of Aerospace Research and Development is again sponsoring the conference, and we are very grateful for their continuous support. We hope many of you will join us in Turin, a beautiful city! ☒

## 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.*

★ **2005 International Conference on Fatigue Management in Transportation Operations**, September 11–15, 2005, Seattle, Washington. Bill Rogers, wjrogers@u.washington.edu, <http://www.engr.washington.edu/epp/fmto/>.

★ **4th International Conference on Cyberspace in Ergonomics**, September 15–October 15, 2005. cyberg2005@umthombo.wits.ac.za, <http://cyberg.wits.ac.za>.

**Human Factors and Ergonomics Society 49th Annual Meeting**, September 26–30, 2005, Orlando, FL. info@hfes.org, <http://www.hfes.org/Meetings/05annualmeeting.html>.

**HFES Europe Chapter 2005 Annual Meeting**, October 26–28, 2005, Turin, Italy. Dick De Waard, d.dewaard@hfes-europe.org, <http://conference.hfes-europe.org>.

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

★ Indicates new listing. ☒

## NEWS

# BCPE Celebrates 15-Year Anniversary

*By Peter Budnick and Arnie Lund, BCPE Board Members*

The Board of Certification in Professional Ergonomics (BCPE) is proud to celebrate its sixteenth year. Incorporated in 1990, the independent nonprofit organization remains committed to its mission: "To provide ergonomics certification to protect the public, the profession, and its professionals by assuring standards of competency and advocating the value of certification."

Instrumental in BCPE's formation were notable HFES members Steven M. Casey, Alphonse Chapanis, David J. Cochran, H. Harvey Cohen, Jerry R. Duncan, Hal W. Hendrick, Dieter W. Jahns, David Meister, George A. Peters, and Melvin H. Rudov. Many dedicated volunteer HFES professionals have since followed their lead, and the organization continues to grow in strength, influence, and numbers.

BCPE is unique as a professional certification body for ergonomics/human factors in that it received the endorsement of the International Ergonomics Association in 2001. BCPE was the first accredited ergonomics certifying body, is an active member of the National Organization for Competency Assurance, and is working toward the strategic goal of satisfying the standards set forth by the National Commission for Certifying Agencies.

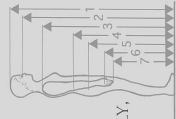
For more information on BCPE and its certification process, contact BCPE at 888/856-4685, bcpehq@bcpe.org, <http://www>.

**Plan to Attend!**  
**HFES 49th**  
**Annual Meeting**  
**Orlando, Florida**  
**September 26–30, 2005**

# NEW!

## “EXTRA-ORDINARY” ERGONOMICS

HOW TO ACCOMMODATE  
SMALL AND BIG PERSONS,  
THE DISABLED AND ELDERLY,  
EXPECTANT MOTHERS,  
AND CHILDREN



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HFES proudly announces its newest title, copublished with CRC Press, “*Extra-Ordinary Ergonomics*, a comprehensive guide to designing for special populations. Underscoring the need for extraordinary ergonomics, the book illustrates various approaches to measuring the characteristics, capabilities, and limitations of those who differ from the norm. Kroemer explains how to assess and determine abilities and needs and demonstrates how to design tools, homes, and environments to make working space safe and living space easy.

Researchers and students will find helpful information about measuring people’s sizes, strengths, weaknesses, and capabilities, and from this information determine the needs for specific ergonomic accommodations. The book enables human factors professionals, architects, and designers to devise work tasks, devices, tools, and environments for special populations – particularly for children. Health care professionals and employers will discover ways to help people who suffer from temporary or permanent disabilities so they can cope with the demands at work, at home, or in a care facility.

ISBN 0-8493-3668-6, 272 pages, 6 x 9”, \$70.00 for HFES members, \$79.95 for non-members, plus shipping/handling. View the detailed table of contents and author biography, and order online at <http://www.hfes.org/Publications>, or contact HFES at P.O. Box 1369, Santa Monica, CA 90406-1369 USA, 310/394-1811, fax 310/394-2410.

*This book makes a compelling argument that within the ergonomics community there needs to be a much greater emphasis on extreme variations in population attributes. It very nicely illustrates how combinations of age, gender, and common sensory and motor impairments alter the performance capability of various groups. Some quantitative design recommendations are included, though it also is made clear that much more needs to be learned about “extraordinary” populations to substantiate specific intervention strategies in the future.*

– Don B. Chaffin, Distinguished University Professor, University of Michigan

# Bulletin

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Features Editor: Pamela Savage-Knepshield  
Student Views Editor: Melanie Diez  
Communications Director: Lois Smith  
Assistant Editor: Jeremy Loudonback  
Advertising: R. C. Bublitz & Associates,  
800/485-5029; [dick-rcb@juno.com](mailto: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](mailto:info@hfes.org)  
Editorial/Advertising: [lois@hfes.org](mailto:lois@hfes.org)  
Placement Service: [placement@hfes.org](mailto:placement@hfes.org)  
Annual Meeting: [lois@hfes.org](mailto:lois@hfes.org)

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

## FLASH!

Don't Miss Early Registration  
for the Annual Meeting

The deadline for early registration for  
the 2005 HFES Annual Meeting in Or-  
lando is September 26.

### Discounted Rates at the Annual Meeting Hotel

The last day to receive discounted rates  
at the Loews Royal Pacific Resort at Uni-  
versal Orlando for the 2005 HFES Annual  
Meeting is September 4.

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