Technical Group Officers and Activities

Members may view the digital version (with linked Web and e-mail addresses) at hfes.org.

COUNCIL OF TECHNICAL GROUPS
Jennifer Riley, Chair
Caroline Cao, Immediate Past Chair
Lawrence Hettinger, Chair-Elect

AEROSPACE SYSTEMS TECHNICAL GROUP
The Aerospace Systems Technical Group (ASTG) works to further the application of human factors/ergonomics in the development, design, certification, operation, and maintenance of human-machine systems in the aviation and space environments. The group addresses issues relevant to civilian and/or military systems.

At the 2013 Annual Meeting in San Diego, the TG sponsored 5 lecture sessions, 2 panels, and 2 interactive sessions organized by the program chair.

The group had 425 members as of December 31, 2013.

Contact the Aerospace Systems Technical Group, c/o Dennis B. Beringer, P.O. Box 25082, AAM-510, Oklahoma City, OK 73125, 405/954-6828, fax 405/954-4852, dennis.beringer@faa.gov, http://www.hfes.org/astg/.

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Jason Kring
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Valerie J. Gawron
Historian
AGING TECHNICAL GROUP

It is generally acknowledged that age-related changes in physiological and cognitive functioning affect, to some extent, the ability of older people to successfully perform or function in many life activities. The performance problems encountered by this population are becoming increasingly important given demographic changes and the “graying” of society. Human factors/ergonomics, with its emphasis on the analysis of human capabilities and design to fit these capabilities, is highly suited to solving problems encountered by older individuals in work, home, and leisure activities. The Aging Technical Group consists of people interested in HF/E applications appropriate to meeting the needs of older people and other special populations in a wide variety of life settings. This includes understanding the performance capabilities and user needs of these populations in homes, at work, and at leisure, and identifying and designing environments, products, and activities that best fit these needs and characteristics.

At the Aging TG business meeting luncheon during the HFES Annual Meeting in San Diego, new officers were introduced and the group discussed the TG’s technical sessions, the student paper and scholarship awards, the budget, and the Web site. The Arnold Small Student Paper Award recipient was Wei-Ting Yen (Ohio State University) for “Product Physical Interface Design Characteristics for Older Adults With Hand Use Limitations: Laboratory Study.” The Aging TG Research Scholarship Award ($500) was given to HeeSun Choi (North Carolina State University) to support her research, “Aging and Attentional Failures During Driving.” An aging potpourri session was part of the technical program.

The group had 278 members as of December 31, 2013.


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(2014)

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COGNITIVE ENGINEERING AND DECISION MAKING TECHNICAL GROUP

The Cognitive Engineering and Decision Making Technical Group (CEDMTG) focuses on research on human cognition and decision making and the application of this knowledge to the design and engineering of sociotechnical systems and the implementation of training programs. Emphasis is on characteristics of cognition in complex, real-world settings for individuals, teams of people, and intelligent agents; factors that affect decision making; descriptive models of cognition and decision making; and training strategies for influencing or assisting cognitive processes in complex work settings.

At the 2013 Annual Meeting, the CEDMTG sponsored 16 technical sessions, 10 lecture papers, and 6 panel sessions. A highlight was the panel session “Trends in Decision-Making Research: How Can They Change Cognitive Engineering and Decision Making in Human Factors?” which featured long-time CEDM researcher and contributor Gary Klein, distinguished decision-making researcher Frank Yates, and 2012 Nobel Prize Winner Alvin Roth.

In addition to the technical program, the TG gave student travel awards to Plinio Morita, Cyrus Foroughi, and Ganyan Sun to support their attendance at the Annual Meeting, and presented the Best Student Paper Award to first place winner Michael Jenkins (University at Buffalo-SUNY), with second place going to Travis Wiltshire and third place to Robert DeLoach and James Won. The TG recognized outgoing Student Affairs Officer Miranda Cornelissen for coordinating these efforts outgoing Newsletter Editor Lisa Jo Elliot.

The group had 819 members as of December 31, 2013.


COMMUNICATIONS TECHNICAL GROUP

The Communications Technical Group (CTG) is concerned with all aspects of human-to-human and human-to-machine communications, with special emphasis on communications mediated by technology. The group continues to focus on traditional voice communications, but with an increasing emphasis on social networking, mobile communications, and multimedia communications such as the Internet, Internet telephony, messaging, interactive television, video conferencing, collaborative communications, and multimedia information providers, as well as the inherent benefits and risks associated with these avenues of communication. Members are interested in the design and evaluation of user interfaces for communication products, systems, and services and in enabling technologies such as speech, mobile, and television input devices. These are being applied in consumer, business, educational, military, and medical settings.

During 2013, CTG’s main focus was preparing a high-quality technical program for the Annual Meeting in San Diego. The CTG hosted the lecture

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session, “Cyber Warfare, ASL and Text-Speak Communication,” which covered issues such as use of “text-speak,” the stresses of being an American Sign Language Interpreter, and possible disruptions of team performance using collaboration tools. This variety of subject matter was also evident in the posters submitted to the CTG; they addressed topics related to team-based communications, interactive voice response systems, and communications during high-stress activities. In addition, the CTG hosted a panel discussion entitled “Human Factors in Cyber Warfare: Alternative Perspectives.”

The group had 117 members as of December 31, 2013.

Contact the Communications Technical Group, c/o Aaron Bangor, 9505 Arboretum Blvd., Austin, TX 78759, 512/372-5732, aaron_bangor@labs.att.com, http://www.linkedin.com/groups?gid=3753047&trk=my_groups-b-grp-v.

COMPUTER SYSTEMS TECHNICAL GROUP

The Computer Systems Technical Group (CSTG) is concerned with the human factors in the design and usability of computer systems. This includes the user-centered design of hardware, software, applications, documentation, work activities, and the work environment. Practitioners and researchers in the CSTG community take a holistic, systems approach to the design and evaluation of all aspects of user-computer interactions. Some goals are to ensure that computer systems are useful, usable, safe, and, where possible, fun and to enhance the quality of work life and recreational/educational computer use by ensuring that computer interface, function, and job design are interesting and provide opportunities for personal and professional growth.

In addition to sponsoring lecture presentations and posters at the 2013 Annual Meeting in San Diego, the TG cosponsored User Experience (UX) Day with the Internet Technical Group, a dedicated track of programming specifically geared for UX professionals. UX Day 2013 featured invited speaker Kath Straub and was well attended. The TGs are planning UX Day 2014 for the Chicago meeting. The CSTG also presented a best paper award.

The group had 275 members as of December 31, 2013.

EDUCATION TECHNICAL GROUP

The Education Technical Group (ETG) is concerned with the design of educational systems, environments, interfaces, and technologies associated with human factors/ergonomics education. The group consists of educators, researchers, students, and others interested in educational HF/E and focuses on the education and training of HF/E specialists in academia, industry, and government. The group seeks to foster a free exchange of ideas, techniques, and products among members to further the cause of educating HF/E professionals. Its mission also encompasses educational ergonomics and the study and application of HF/E principles applied to the design of educational systems. This includes addressing the use of various types of technologies, classroom design, educational topics, and teaching methods.

The ETG received a total of 20 submissions for 2013 and accepted 16 of them for presentation at the Annual Meeting.

The group had 228 members as of December 31, 2013.

Contact the Education Technical Group, c/o Christopher Brill, Old Dominion University, 250 Mills Godwin Bldg., Norfolk, VA 23529, 757/683-4242, fax 757/683-5087, jcbrill@odu.edu, http://tg.hfes.org/etg/.

ENVIRONMENTAL DESIGN TECHNICAL GROUP

The Environmental Design Technical Group is concerned with the relationship between human behavior and the designed environment. Common areas of research and interest include ergonomic and macroergonomic aspects of design within home, office, and industrial settings. At a time when there is sharp focus on creating sustainable environments, the group plays a vital role in bringing together researchers with the latest ideas to improve the places where people live, learn, laugh, and love, and to span all ages, from children to the elderly. An overall objective of this group is to foster and encourage the integration of ergonomics principles into the design of all built environments.

The Environmental Design Technical Group sponsored three lecture sessions at the 2013 Annual Meeting.

The group had 155 members as of December 31, 2013.

FORENSICS PROFESSIONAL GROUP

Forensics concerns the integration of specialized scientific or technical knowledge and information within the context of the legal system. Forensics Professional Group (FPG) members are human factors/ergonomics (HF/E) specialists who share a common interest in both the scientific development of information about human capabilities and limitations while performing various activities and tasks, and the proper application of this specialized knowledge or technical information to relevant aspects of civil or criminal cases being litigated within legal jurisdictions across the country.

FPG members are often retained by attorneys representing opposing parties in such cases and may be called on to analyze, interpret, explain, and/or testify about relevant HF/E issues. Without the benefit of such HF/E expert opinions, the “finders of fact” (judges and/or jury members) charged with deciding the outcome of a given case may not be as likely to fully understand or properly appreciate the impact of such HF/E considerations during their deliberations.

Members communicate via list server messages, the newsletter (The FORVM), Web site (http://hfesforensic.org), and HFES LinkedIn subgroup. The TG’s principal yearly activity involves soliciting proposals, evaluating submissions, and organizing panel discussions, technical paper sessions, and other presentation formats for the HFES Annual Meeting. At the 2013 meeting in San Diego, the FPG sponsored two technical paper sessions, one panel discussion, and one methodology demonstration session dedicated to the use of animated computer graphics to create compelling presentations in HF/E forensic cases.

In 2013, several FPG members also led and/or participated in activities of interest and value to the FPG. One of these efforts, still under way, involves updating the FPG’s “Position Paper Supporting Human Factors and Ergonomics Practitioners in Forensics.” This TG white paper was originally developed by a group of FPG members in 1996 and was subsequently revised in 2004. This third edition of that valuable reference document will become available on the FPG Web site in the first quarter of 2014.

A second significant activity has involved the publication of an E-book titled “HFES Guide to Forensic Human Factors.” Though not exclusively an FPG-sponsored project, the book’s editors and most of the chapter authors and peer reviewers are prominent FPG members. The content is largely drawn from HFES Annual Meeting Proceedings papers presented in FPG-sponsored sessions since 1985. It is expected that the book will be released before the middle of 2014.

The group had 268 members as of December 31, 2013.

Contact the Forensics Professional Group, c/o David R. Lenorovitz, 303/762-6333, fpg@lenproservices.com, http://hfesforensic.org.

David R. Lenorovitz
Chair
Ilene B. Zackowitz
Program Chair
Joseph Cohen
Webmaster
Joseph Cohen
Newsletter Editor
Soyun Kim
Secretary/Treasurer
HEALTH CARE TECHNICAL GROUP
The Health Care Technical Group (HCTG) is interested in maximizing the contributions of human factors/ergonomics to medical systems effectiveness and the quality of life of people who are functionally impaired.

For the 2013 Annual Meeting, the HCTG sponsored six discussion panels, one symposium, and two lecture sessions, as well as a number of posters. The TG participates heavily in the HFES International Symposium on Human Factors and Ergonomics in Health Care.

The group had 716 members as of December 31, 2013.

Contact the Health Care Technical Group, c/o Michelle Rogers, College of Computing and Informatics, Drexel University, 3141 Chestnut St., Philadelphia, PA 19104, 215/895-2922, fax 215/895-2494, mrogers@drexel.edu.

HUMAN PERFORMANCE MODELING TECHNICAL GROUP
The Human Performance Modeling Technical Group focuses on the development and application of predictive, reliable, and executable quantitative models of human performance. It considers the human, engaged in some goal-directed behavior, in the context of a specific task environment.

For the 2013 Annual Meeting, the TG sponsored three sessions and cosponsored two sessions.

The group had 315 members as of December 31, 2013.

Contact the Human Performance Modeling Technical Group, c/o Yili Liu, yililiu@umich.edu.

INDIVIDUAL DIFFERENCES IN PERFORMANCE TECHNICAL GROUP
The Individual Differences in Performance Technical Group (IDTG) was established to serve HFES members who share an interest in any of the wide range of individual differences or personality variables that are believed to mediate human performance. Members of IDTG share a common view that the study of these differences as related to human performance is not only useful but also may lead to better design of equipment, operational environments, and training selection and to improved prediction of human task performance. A motto adopted as a guide for the group is “Prevent Injury by Recognizing Individual Differences in Human Capabilities and Limitations.”

The important shared characteristic of IDTG members is their interest in how individual-differences variables and personality relate to human performance in some important theoretical or applied manner. The domain of research and applied topics shared within this technical group includes a broad range of individual differences, such as performance ability, gender, intelligence, education, training level, and anthropometric variables. The IDTG domain also includes a wide range of modern personality aspects of social, cognitive, and biological origins. The crucial unifying principle of the IDTG is the importance of such variables for the advancement of HF/E theory, research, and application.
Most of the research related to personality and individual differences in human performance is conducted at universities, government and military agencies, and companies, many of which are concerned with training, selection, or improving performance.

In addition, many researchers are interested in exploring the basic theoretical foundations that underlie individual differences or the personality and human performance relationships. Current research activities include recognizing individual differences in human capabilities and limitations, identifying individual differences in performance through different approaches, and promoting the exchange of ideas in a diverse group of cognitive engineering, biomechanics and human factors.

In 2013, the TG sponsored three lecture sessions for the Annual Meeting: “Models and Methods for Prediction,” “Individual Differences in Performance and Stress,” and “Individual Differences in Emotional and Multitasking Performance.” Presenters considered different approaches to individual differences in human performance and their theoretical and practical implications for the design of human-technology interfaces and training procedures. The panelists presented the results of recent studies using cognitive and psychometric measures to examine individual differences in human performance under stress.

The group had 174 members as of December 31, 2013.


MACROERGONOMICS TECHNICAL GROUP

The Macroergonomics Technical Group (METG) focuses on organizational design and management issues in human factors/ergonomics and on work system design and human-organization interface technology. TG members are committed to improving work system performance (e.g., productivity, quality, health and safety, quality of work life) by promoting work system analysis and design practice. They are also committed to supporting empirical science concerned with the technological subsystem, personnel subsystem, external environment, organizational design, and the interactions on the subject of macroergonomics and safety.


The METG business meeting featured a presentation by invited speaker Klaus Zink (University of Kaiserslautern).

The group had 184 members as of December 31, 2013.

Contact the Macroergonomics Technical Group, c/o Enid Montague, enid.montague@northwestern.edu, http://tg.hfes.org/metg/.
OCCUPATIONAL ERGONOMICS TECHNICAL GROUP

The Occupational Ergonomics Technical Group (OETG), formerly the Industrial Ergonomics Technical Group (IETG), is concerned with the application of ergonomics data and principles for improving the safety, productivity, and quality of work across all industries.

In 2013, the OETG received a number of quality abstracts for the HFES Annual Meeting, resulting in nine technical sessions that included an invited symposium on the NIOSH upper-extremity MSD consortium findings, a discussion panel on the state-of-the-art findings on occupational risk factors for low-back disorders, and an invited address on health and space medicine. The group has approximately 500 members.

The group had 486 members as of December 31, 2013.


PERCEPTION AND PERFORMANCE TECHNICAL GROUP

The primary purpose of the Perception and Performance Technical Group (PPTG) is to promote the exchange of information about perception and its relation to human performance. As its name implies, PPTG encompasses all sensory/perceptual modalities, not just vision. Areas of concern include the nature, content, and quantification of sensory information and the context in which it is displayed, the physics and psychophysics of information display, perceptual and cognitive representation and interpretation of displayed information, assessment of workload using tasks having a significant perceptual component, and actions and behaviors that are consequences of information presented to the various sensory systems.

PPTG sponsored six lecture sessions comprising 30 presentations and eight posters distributed across two poster sessions. Two best student paper awards of $500 each were awarded.

The group had 447 members as of December 31, 2013.

Contact the Perception and Performance Technical Group, c/o Victor Finomore, 937/904-7123, victor.finomore.1@us.af.mil, http://tg.hfes.org/pptg/.
PRODUCT DESIGN TECHNICAL GROUP

The Product Design Technical Group is dedicated to developing consumer products that are useful, usable, safe, and desirable. By applying the principles and methods of human factors, consumer research, and industrial design, the group works to ensure the success of products sold in the marketplace.

PDTG members focus on the design of commercial products (both hardware and software) and the product design process. They work in design teams that include market researchers, industrial designers, and engineers. They can play key roles in the design of products; these roles include concept development through the creative combination of the subjective qualities that make products attractive, interesting, and evocative with the practical demands of function, ease of use, and safety.

At the 2013 Annual Meeting, the PDTG sponsored four paper sessions on topics such as touch screens, usability research, and wearables. In addition, the group sponsored the Stanley H. Caplan User-Centered Product Design Award and the PDTG/Health Care TG networking reception.

The group had 558 members as of December 31, 2013.


SAFETY TECHNICAL GROUP

The Safety Technical Group consists of individuals interested in research and applications concerning safety-related human factors issues. Example application areas include transportation, industry, military, aerospace, offices, public areas and buildings, recreation, and home environments. The Safety TG also maintains, through the activities of its members, relationships with other safety organizations and standards-making bodies.

The Safety TG sponsored three sessions at the 2013 Annual Meeting and had 579 members as of December 31, 2013.

Contact the Safety Technical Group, c/o Nancy Daraiseh, Cincinnati Children's Hospital Medical Center, 513/636-7236, nancy.daraiseh@cchmc.org, http://www.hfes.org/stg/.
SURFACE TRANSPORTATION TECHNICAL GROUP

The Surface Transportation Technical Group provides a forum in which members exchange information, methodologies, and ideas related to human factors/ergonomics in international surface transportation field. Surface transportation encompasses numerous mechanisms for conveying humans and resources. These include passenger, commercial, and military vehicles, on- and off-road; mass transit; maritime transportation; rail transit, including Vessel Traffic Services (VTS); pedestrian and bicycle traffic; and highway and infrastructure systems, including Intelligent Transportation Systems.

The TG's primary objectives are to provide an avenue through which members can share information about new HF/E developments and findings in their respective fields related to surface transportation; to foster and promote working relationships with other technical groups in HFES; to serve as a liaison between HFES and other professional organizations related to surface transportation (e.g., ASSHTO, ITE, SAE, and the Transportation Research Board); to serve as a resource for the review and presentation of surface transportation technical papers at HFES Annual Meetings; and to raise public awareness of the involvement of HF/E professionals in the surface transportation field.

The Surface Transportation Technical Group hosted six lecture sessions, two discussion panels, and five posters at the 2013 Annual Meeting and had 389 members as of December 31, 2013.

The System Development Technical Group (SDTG) fosters research and the exchange of information on integrating human factors/ergonomics into the development of systems. System development is concerned with defining HF/E activities and integrating them into the system development process in order to provide systems that include the human as an integral part.

For the 2013 Annual Meeting, the SDTG sponsored two lecture sessions and a student lecture session. Two discussion panels were offered, “The Art of Developing a Human Factors Standard: The Authors’ Perspective” and “Verification and Validation: Human Factors Requirements and Performance Evaluation.” An alternative-format session, called “Requirements Jeopardy,” was held, and a presentation was made on user workflow-centered design.

The group had 181 members as of December 31, 2013.


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