



## CONTENTS

<b>ANNUAL MEETING</b> .....	<b>5</b>	<b>STANDARDS</b> .....	<b>7</b>
<b>JCEDM</b> .....	<b>6</b>	<b>PUBLIC POLICY MATTERS</b> .....	<b>7</b>

## HFES Member Education and Training Needs

*By Nancy J. Stone & Paul L. Derby*

In 2003, the Education and Training Committee determined the education and training needs of the HFES membership using a Web-based survey (Cooke & Gorman, 2004). Another Web-based survey was administered in May 2009 to all current members. The 2009 survey, like the earlier one, aimed to determine how needs have changed and whether former needs have been met through various Education and Training Committee activities. In addition, the 2009 needs survey included questions to assess new needs that reflect changes in the HF/E profession and technology, and to gain feedback on the Educational Resources Web page (<http://www.hfes.org/web/EducationalResources/educresourcesmain.html>).

This report highlights the main findings of the survey. The complete report is available in the Educational Resources section at [http://www.hfes.org/web/educationalresources/09HFES\\_Educ\\_Needs\\_Survey\\_Report.pdf](http://www.hfes.org/web/educationalresources/09HFES_Educ_Needs_Survey_Report.pdf).

### Demographics

Of the 346 respondents, the greatest number of respondents was at the PhD level, followed by the master's and then bachelor's degrees (see Table 1). This trend is similar to the results of 2003; however, the 2009 response rate for PhDs is higher and the master's and bachelor's degree response rates are lower (43.3%, 37.1%, 12.3%, respectively; Cooke & Gorman, 2004).

**Table 1. Highest Degree Obtained**

Degree	<i>n</i>	%
BS/BA	33	9.6
M/MA	108	31.5
PhD	183	53.4
MD	2	0.6
EdD	2	0.6
Other	15	4.4
<b>Total</b>	<b>343</b>	<b>100%</b>

Respondents' major field of study and concentration fell into these categories: behavioral science (44.1%), engineering (35.9%), human factors–undefined (6.4%; i.e., those who could not be classified as behavioral science or engineering), medicine/health

(5.8%), and other/blank (7.8%). The two largest categories were once again behavioral science and engineering; however, the proportions were more equal than in the 2003 data (58% behavioral science and 26% engineering; Cooke & Gorman, 2004).

Similar to the 2003 survey, practitioners (60.5%) were the largest occupational group of the respondents, followed by academics (18.6%) and students (10.3%). Another 10.6% of the respondents indicated having an "other" occupation, typically indicating a combination of the other choices (e.g., academic and practitioner). The majority of practitioner respondents reported working in industry (57.6%), government (30.3%), or private consulting (12.2%).

In order to further understand the demographics of the respondents, we asked individuals to rank order their top three areas (primary, secondary, and tertiary). Unfortunately, the survey system allowed individuals to mark multiple primary, secondary, and tertiary areas. That is, instead of ranking just their top three areas, some individuals ranked each or multiple areas as either a primary, second, or tertiary area, invalidating these data. Therefore, it was not possible to identify individuals' top three fields in which they work or to make a comparison with the 2003 survey data.

### Education and Training Needs of Occupational Groups

Because education and training needs are likely to vary depending on whether one is a student, academic, or practitioner, different sets of items were presented to these three occupational subgroups. Therefore, only students should have responded to the student items, the academics to the academics items, and the practitioners to the practitioner items. Because it was possible for anyone to respond to any set of items, the data were sorted by occupation. Therefore, only those responses made by respondents who identified as students were used in the analysis of student needs. The same process of analysis was used for the academic and practitioner items.

Respondents indicated the extent to which an item was an education or training need by selecting either "not a need," "a need," or "an important need." To compare the results with the 2003 data, we combined the "need" and "important need" categories to represent the "need" category. Based on the percentage of need, the items were rank ordered for each occupational subgroup.

Not surprisingly, students' top needs target job and career

## HFES Member Education and Training Needs

(continued from page 1)

needs, followed closely by educational needs (accreditation, books, and internships). Accreditation of graduate programs is a new need, compared with the 2003 survey results, indicating that students are more aware of and concerned about the accreditation of graduate programs.

**Table 2. Top Five Student Needs**

Education and Training Need	A Need (%)	Not a Need (%)	n
Information about current HF/E job openings	91	9	32
Information about HF/E career opportunities	91	9	32
Accreditation of HF/E graduate programs	90	10	30
HF/E internships	88	12	33
Books on HF/E topics	87	13	31

Academics also were highly concerned about internship opportunities, which was the top academic need in 2003. The need for improved textbooks is new to the top five academic needs areas, as well as a database for tracking academic programs. Finally, the need to attract undergraduates to the profession and to HF/E programs is related to a current workforce concern about developing enough HF/E professionals to meet workplace demands.

**Table 3. Top Five Academic Needs**

Education and Training Need	A Need (%)	Not a Need (%)	n
Opportunities for student HF/E internships	92.5	7.5	53
Improved HF/E textbooks	89	11	56
Attracting undergraduates to HF/E graduate programs and in general to field of HF/E	88	12	57
Attracting and retaining students for PhD programs	86	14	56
Instructional videos (or CDs or DVDs) on HF/E topics	81	19	53

Practitioners are concerned that there are not enough qualified practitioners. The needs for higher-quality graduate programs in HF/E and more practitioner training and development opportunities also were expressed needs in 2003. The need to increase the quality of undergraduate education and the number of qualified specialists who have the opportunity to access valid resources seems to reflect the current needs of practitioners and academics. This finding further suggests that there might be some workforce issues to address.

**Table 4. Top Five Practitioner Needs**

Education and Training Need	A Need (%)	Not a Need (%)	n
Increasing the number of HF/E specialists with practical HF/E experience	93	7	182
Higher-quality graduate programs in HF/E	86	14	178
Higher-quality undergraduate programs in HF/E	85	15	179
Web sites on specific topics (e.g., workload, virtual reality, training) regularly updated by experts	84	16	179
More practitioner training and development opportunities	84	16	175

### Accreditation Issues

In 2003, accreditation did not make the top five lists for students, academics, or practitioners, but it is apparent from the 2009 results that accreditation has become a greater need for students. In 2003, the largest proportion of respondents indicating that accreditation was a need were students, followed by practitioners and then academics (Cooke & Gorman, 2004). Although accreditation was not a top five need for academics or practitioners in the latest survey, issues related to improved education are.

### Specific Content Areas and Skills

Besides assessing general needs, we included questions regarding which content areas and skills are important to one's work as well as which content areas and skills reflect the greatest need for education and training. Respondents first indicated how important content areas were to their jobs and then indicated, based on the same set of content items, the extent to which an item was an education or training need. We used the same process to assess the extent to which skills were important to respondents' work and if more education and training was needed on those skills.

The response options for importance to work were "not at all important," "somewhat important," or "extremely important." On whether the item was an education and training need, the response options were "not a need," "a need," or "an important need." To compare the results with the 2003 data, we combined the "somewhat important" and "extremely important" categories to represent an "important" category. Likewise, the "need" and "important need" categories were combined to represent the "need" category. Based on the percentage that each item was important or a need, we rank ordered the items for each occupational subgroup.



Human Factors and Ergonomics Society

# Bulletin

Volume 52, Number 8

August 2009

The HFES Bulletin (ISSN 1527-3660) is published 11-12 times a year by the Human Factors and Ergonomics Society, 1124 Montana Ave., Suite B, Santa Monica, CA 90403 USA, <http://hfes.org>. Address inquiries and address changes to HFES, P.O. Box 1369, Santa Monica, CA 90406-1369 USA, 310/394-1811, fax 310/394-2410, <http://hfes.org>.

Copyright © 2009 by the Human Factors and Ergonomics Society. Printed in the USA.

Tables 5a and 5c present data on the importance of various content areas and skills to one's work. Tables 5b and 5d present the need for education and training for the same content areas and skills. The top five content areas that were viewed as important to one's work appear to be fairly consistent across occupational groups. The need for education and training in these content areas appears to vary somewhat depending on the occupational group, which indicates that not all important content areas are seen as a high need for education and training.

The content areas that are considered important and that represent a need for training and education have changed somewhat since 2003. Specifically, only three of the top five content areas felt to be important to work are the same as reported by Cooke and Gorman (2004): cognition, display design/graphical user interface/signage, and human-computer interaction (HCI); and three of the top five content areas needing education and training are the same: again, display design/graphical user interface/signage, HCI, and cognition.

**Table 5a. Top Five Content Areas Important for Work (Percentage of Responses)**

Content Area	Overall	Student		Practitioner	
		Overall	Academic	Overall	Academic
Cognition	<b>91</b>	<b>96</b>	<b>96</b>	<b>88</b>	<b>88</b>
HCI	<b>89</b>	80	<b>92</b>	<b>89</b>	<b>89</b>
Decision making	<b>87</b>	<b>82</b>	<b>94</b>	<b>84</b>	<b>84</b>
Perception & performance	<b>87</b>	<b>82</b>	83	<b>90</b>	<b>90</b>
Display design/graphical user interface design/signage	<b>86</b>	<b>83</b>	86	<b>86</b>	<b>86</b>
Safety	84	<b>89</b>	84	83	83
Consumer product design	70	<b>85</b>	60	73	73
Human performance modeling	78	<b>82</b>	74	79	79
Situation awareness	81	76	<b>89</b>	80	80
Training	82	79	<b>86</b>	81	81

Note: Bold numbers indicate top five. More than five items are highlighted when there was a tie for the fifth slot.

**Table 5b. Top Five Content Areas Needing Education and Training (Percentage of Responses)**

Content Area	Overall	Student		Practitioner	
		Overall	Academic	Overall	Academic
Human performance modeling	<b>69</b>	63	<b>71</b>	<b>65</b>	<b>65</b>
Display design/graphical user interface design/signage	<b>67</b>	<b>74</b>	57	<b>69</b>	<b>69</b>
HCI	<b>66</b>	63	<b>62</b>	<b>67</b>	<b>67</b>
Decision making	<b>65</b>	<b>72</b>	60	<b>65</b>	<b>65</b>
Cognition	<b>64</b>	<b>69</b>	<b>62</b>	62	62
Augmented cognition	55	<b>69</b>	61	50	50
Expert systems	51	<b>64</b>	55	47	47
Training	59	<b>64</b>	60	55	55
Health care	53	59	<b>64</b>	47	47
Perception & performance	60	61	<b>62</b>	58	58
Stress, fatigue, sleep	61	54	49	<b>65</b>	<b>65</b>

Note: Bold numbers indicate top five. More than five items are highlighted when there was a tie for the fifth slot.

Similarly, there was general agreement on the skills important to work across occupational groups, but the perceived need for education and training varies. The skills important to work listed in Table 5c are the same skills listed by Cooke and Gorman, although the rankings changed slightly. The needs for education and training also reflect a great deal of similarity to the 2003 survey data.

**Table 5c. Top Five Skills Important for Work (Percentage of Responses)**

Skill	Overall	Student		Practitioner	
		Overall	Academic	Overall	Academic
Oral communication skills	<b>98</b>	<b>97</b>	<b>98</b>	<b>99</b>	<b>99</b>
Writing skills	<b>97</b>	<b>93</b>	<b>98</b>	<b>98</b>	<b>98</b>
Computer skills – general, basic skills (e.g., databases, Internet skills)	<b>97</b>	<b>97</b>	<b>100</b>	<b>96</b>	<b>96</b>
Statistics and other data analysis skills	<b>92</b>	<b>94</b>	<b>100</b>	91	91
Task analysis/cognitive task analysis	<b>92</b>	87	<b>97</b>	<b>93</b>	<b>93</b>
Experimental methods	90	<b>94</b>	92	89	89
Application of HF/E guidelines and principles (e.g., ANSI standards)	90	<b>87</b>	80	<b>94</b>	<b>94</b>

Note: Bold numbers indicate top five. More than five items are highlighted when there was a tie for the fifth slot.

**Table 5d. Top Five Skills Needing Education and Training (Percentage of Responses)**

Skill	Overall	Student		Practitioner	
		Overall	Academic	Overall	Academic
Statistics and other data analysis skills	<b>65</b>	<b>81</b>	<b>77</b>	<b>60</b>	<b>60</b>
Simulation methods and tools	<b>64</b>	71	<b>66</b>	<b>61</b>	<b>61</b>
Task analysis/cognitive task analysis	<b>62</b>	73	56	<b>63</b>	<b>63</b>
Usability analysis/engineering/testing	<b>60</b>	67	53	<b>60</b>	<b>60</b>
Application of HF/E guidelines and principles (e.g., ANSI standards)	<b>58</b>	58	54	<b>60</b>	<b>60</b>
Modeling	57	<b>76</b>	<b>62</b>	51	51
Workload measurement (e.g., NASA-TLX)	53	<b>76</b>	48	50	50
Computer skill – programming	47	<b>74</b>	42	43	43
Oral communication skills	46	<b>73</b>	35	45	45
Experimental methods	56	69	<b>58</b>	55	55
Human reliability analysis	53	55	<b>57</b>	49	49

Note: Bold numbers indicate top five. More than five items are highlighted when there was a tie for the fifth slot.

### Feedback on Educational Resources Web Site

In response to the education and training needs identified in the 2003 survey, the Education and Training Committee developed

## HFES Member Education and Training Needs

(continued from page 3)

the Educational Resources (ER) section of the HFES Web site (<http://www.hfes.org/web/EducationalResources/educresourcesmain.html>). We asked about respondents' awareness, perceived usefulness, and ease of use of the site. The majority of respondents (77%) were unaware that the Educational Resources section existed. Therefore, most of the respondents (83%) had never used it. Nevertheless, the majority of respondents (55%) found the site useful.

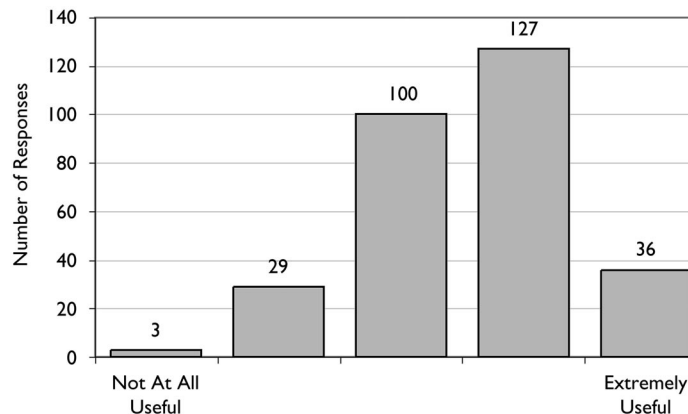


Figure 1: Number of responses ( $n = 295$ ) indicating the usefulness of the Educational Resources Web site.

Only 28% of respondents found the ER site easy to use, whereas 33% found it difficult to use. It is possible that the ER site is not easy to use because, as several respondents indicated, the relevant information is too embedded in the site hierarchy.

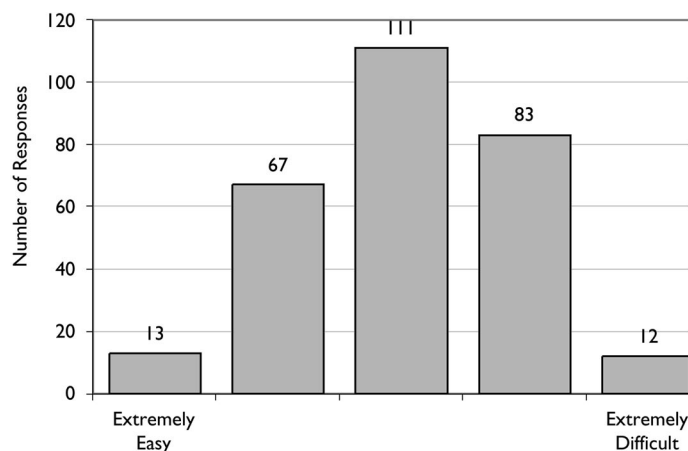


Figure 2: Number of responses ( $n = 286$ ) indicating the ease of use of the ER Web site.

### E&T Committee-Sponsored Workshops

Besides creating the Educational Resources Web site, the Education and Training Committee has been sponsoring Annual Meeting workshops that address members' education and training needs as identified in the 2003 survey. About 6% of respondents indicated attending each of the seven cosponsored workshops. Of

those, 48% found the workshops helped meet their education and training needs, whereas 29% did not. The remaining 22% were neutral.

### General Respondent Comments

A common comment was that the survey was too long and complicated, which is similar to a comment about the 2003 survey. In addition, several individuals suggested the introduction of short courses delivered by distance to meet the needs of individuals who cannot travel to conferences. Finally, some individuals suggested focusing more on the technical skills needed and less on experimental psychology.

### Conclusions

These data suggest that accreditation issues may continue to increase in importance, that the Educational Resources Web site is helpful but difficult to locate and use, and that Annual Meeting workshops have helped some members meet their education and training needs. The Education and Training Committee will use these data to determine ways to further address the identified needs of the HFES membership.

### Acknowledgments

We thank all members who completed the survey ( $N = 346$ ), which reflects a 10.1% response rate (739 members followed the link to the survey). In 2003, the response rate was 30% (Cooke & Gorman, 2004). We realize that some restrictions imposed by the survey tool often made responding frustrating or led to incomplete or inappropriate responses (e.g., multiple concepts ranked as a first need), which might explain why 140 individuals started but did not finish the survey.

Congratulations to HFES Member Jerry Sue Bassalleck, who won the drawing for free 2010 membership dues.

This survey is the result of the work of many people, including Patricia DeLucia, Keith Kozak, Mark Lee, James Beno, Lois Smith, Anthony Andre, Kermit Davis, Paul Green, Elizabeth Davis, and Haydee Cuevas. Special thanks go to Paul Derby, who oversaw the implementation of the survey and data analysis.

### Reference

Cooke, N. J., & Gorman, J. C. (April, 2004). What do HFES members need to know? *Human Factors and Ergonomics Society Bulletin*, 47(4), 1, 4-6.

Nancy J. Stone is professor and chair at Missouri University of Science and Technology (formerly University of Missouri, Rolla). Paul L. Derby is a P.D student at Texas Tech University and is completing an internship at Honeywell in Golden Valley, Minnesota.

**Human Factors and Ergonomics Society**  
**53rd Annual Meeting**  
October 19-23, 2009, San Antonio, Texas USA  
Bookmark [hfes.org](http://hfes.org) for regular updates about exhibiting your products and services, reserving a meeting sponsorship, registering online, viewing the Preliminary Program and creating a personal meeting itinerary, and reserving a hotel room.

# The Future of the Annual Meeting

By Marc L. Resnick, *Technical Program Committee Quality Chair*

The Technical Program Committee sent out a survey in May to almost 5,000 current and recent HFES members as well as nonmember attendees from the past two Annual Meetings. The purpose of the survey was to understand more about how to develop the HFES Annual Meeting for the future. We received almost 600 responses, for a response rate of about 12%. The survey focused on preferences for meetings in general, but we plan to apply the results specifically to HFES.

The purpose of this article is not to go into detail about the results but, rather, to highlight a few key findings and throw out some ideas for you to think about. This is admittedly very speculative, so please read it with that in mind. And please respond to me with your own ideas at [resnickm@fiu.edu](mailto:resnickm@fiu.edu).

## Focused Versus Broad Coverage

The first issue I would like to discuss combines a few data points that may seem at first to be unrelated. First, most respondents prefer meetings that last about three days. As you probably know, we have experimented recently with expanding the Annual Meeting to five full days. This was done because we had received feedback for many years that too many parallel tracks force attendees to miss sessions that they would like to attend. We also found that by far the most attended events during meetings are technical sessions (85% attending frequently), with networking events a distant second (26% attending frequently). Finally, 84% of respondents prefer focused meetings compared with 34% who prefer a broad coverage of the field (the sum is greater than 100% because some respondents like to attend both). And virtually all respondents rated it very important (83%) or somewhat important (32%) to have both academics and practitioners represented.

How are these results related? Our challenge for the future is to allow attendees who want to focus on specific areas to do so without putting too many gaps in their meeting schedules, while still allowing for those who want a comprehensive experience. We recognize the need to focus on technical sessions but also realize that other kinds of events may become more important in the future as new technology perhaps decreases the value of purely technical sessions.

Let me start by describing two strategies used by other organizations. The Institute of Industrial Engineers has taken several steps to allow attendees to focus their time and reduce the number of days they need to be present for their annual meeting. The IIE meeting is divided into two components: The IE Research Conference, which is held on Saturday, Sunday, and Monday; and the IE Solutions Conference, which is held Monday through Wednesday. This gives attendees a choice of one or the other or both. IIE has also spun off several focused conferences that meet at other times during the year for customers who are interested in only particular domains, such as health care. Although this approach may reduce attendance at the IIE Annual Conference, it provides better

value for customers. IIE also has many more organized networking events during their annual conference than HFES does.

Another meeting I would like to compare with the HFES Annual Meeting is the TED (Technology/Entertainment/Design) Conference. TED may not be a direct benchmark, but its international success makes it a good source of new ideas for the future. TED is much more expensive than HFES (\$6,000 registration), and the organizers make videos of the talks available free online at TED.com, YouTube, and iTunes. Why would any attendee (1,000 at the last event) pay so much for content they can get for free? It seems TED attendees are much more interested in the networking opportunities. Despite supporting many social networking technologies around the meeting, TED still realizes that the best networking is done face to face.

Looking at these two benchmarks brings up a few questions about the HFES Annual Meeting. Our strategy has been to recruit as much high-quality technical content as possible from a broad range of HF/E domains. Attendees can focus on a single domain by following the track of just one or two technical groups, or they can get a broad exposure by mixing up their track attendance. We sprinkle in a few networking events to germinate conversations outside the sessions. This approach seems to match the results of the survey. But it conflicts with the strategies used by IIE and TED. TED focuses much more on networking events and IIE allows attendees to separate themselves more easily to focus on particular subtopics. We need to figure out how to better apply the concept of mass customization going forward.

## Using Technology

The foregoing examples lead into a second challenge. Most organizations are experimenting with the use of technology to enhance their meetings. TED's organizers provide online access to high-quality videos and create permanent blogs and social networking around each talk on their Web site. Their intent is to integrate the conference seamlessly into an ongoing conversation that lasts year-round.

Last year, HFES presenters were able to submit multimedia supplements (e.g., video clips, animations) to the Annual Meeting proceedings CD, and this practice will continue for the 2009 meeting. We have discussed many other ideas, including archiving the presentation visuals and audio on the HFES Web site, inviting volunteers to blog the technical sessions in real time with a feed at the Web site, and going to full video recording when costs allow. We are going slowly in this direction (see the article in the July *Bulletin* about our two virtual workshops this year) because we also have heard loud and clear that costs are always a concern. But we also can't let HFES get behind in the use of technologies that are a real value to the meeting and to our members.

## Meeting Usability

We asked a variety of questions about preferences for meeting locations and venues. Most respondents were very true to the profession. The most common answers centered on usability. People want to attend conferences in cities that are easy to get to (e.g., hub airports) and easy to get around (e.g., public transportation) and with venues that make it easy to get from session to session and to

other activities (e.g., well laid out and close to the downtown area). Less important were things like exotic locations or fun things to do outside the conference. International locations caused concern among many because of the increased cost and hassles required to get approval and to travel.

### Economics

Finally, we asked several questions about resources and funding. Most respondents (83%) were limited in the number of meetings they could attend because of funding issues. Many rated it very important to have low-cost lodging at the meeting hotel or close by. Thankfully, only a minority reported that they will be unable to attend this year's HFES Annual Meeting in San Antonio because of the downturn in the economy. Forty-one percent predicted that they will be joining us in October, and those who won't cited a wide variety of reasons other than the economy.

### The Path Forward

I did not title this section "Conclusions" because the survey was not designed to find answers; rather, it was to identify more questions to ask. There are a variety of directions that we can take to expand and develop our Annual Meeting. Our desire to keep costs down limits how many we can experiment with each year. I would appreciate hearing more opinions from the membership and other customers. If you have any comments, please send them to me at resnickm@fiu.edu.

## University Lab Poster Schedule

Following is the listing of university lab posters that will be on display at the 53rd Annual Meeting in San Antonio. The aim of this showcase is to demonstrate the variety of HF/E educational and research programs undertaken in these labs. The lab posters can be viewed, along with technical posters, at the dates and times shown below. See the on-site program for an updated schedule and location of the posters.

### Tuesday, October 20, 1:30 to 3:00 p.m.

- *Georgia Tech*: Problem Solving and Educational Technology Lab, Human Factors and Aging Lab
- *Iowa State University*: Physical Ergonomics Lab & Cognitive Ergonomics/Augmented Human Performance Lab
- *Purdue University*: Human Performance Lab, Human Integrated Systems Engineering Lab, Healthcare and Interactive Visual Engineering Lab
- *The Ohio State University*: Institute for Ergonomics
- *Texas Tech University*: DeLucia/Visual Performance and Health Care, Klein/Performance, Stress, Workload in HC & Jones/Human-Robot Interaction, Industrial Engineering Ergonomics Lab
- *Virginia Tech*: Assessment and Cognitive Ergonomics Lab, Laboratory for User-Centric Innovations in Design, Human-Computer Interaction Lab, Industrial Ergonomics and Biomechanics Lab, Locomotion Research Lab, Safety Engineering Lab, Macroergonomics and Group Decision Systems Lab, Auditory Systems Lab, Vehicle Research and Simulation Lab

- *Wichita State University*: Software Usability Research Lab, Decision Making Research Lab, Perception & Attention, Visual Psychophysics, National Institute of Aviation Research Human Factors Lab, Perception & Cognition, Quantitative Lab

### Thursday, October 22, 1:30 to 3:00 p.m.

- *Auburn University*: Biomechanics Lab, Human Factors Lab
- *California State University, Long Beach*: Center for the Study of Advanced Aeronautic Technologies, Center for Usability in Design and Accessibility
- *Central Michigan University*: Engineering Psychophysiology Lab, Driving Evaluation Education Research Center
- *Clemson University*: Human Factors in Complex Environments Research Lab, Psychology Lab
- *Massachusetts Institute of Technology*: MIT Humans and Automation Lab
- *Missouri Western State University*: Psychology of Design Lab
- *Ohio University*: Human Factors and Ergonomics Lab
- *Old Dominion University*: Applied Sensory Psychology Lab
- *Pennsylvania State University*: Ben Niebel Work Design Lab
- *University of Central Florida*: Team Performance Lab
- *University of Michigan*: Center for Ergonomics
- *University of Virginia*: Human-Automation Interaction Lab, Human Performance Modeling Lab, Tactile Modeling and Simulation Lab

## JCEDM

## JCEDM Special Issue Call for Papers

By Rhona Flin & Laura Militello, Guest Editors

Members and nonmembers are invited to submit papers for a special issue of the *Journal of Cognitive Engineering and Decision Making Journal (JCEDM)* devoted to the general theme, "Twenty Years of NDM: A Review of the Foundations and Progress."

The first naturalistic decision making (NDM) conference was held in 1989, bringing together a diverse set of researchers working on related problems. From that small group, the NDM community of practice has grown worldwide. Significant contributions include models that describe real-world decision making and specialized methods for studying decision making in real-world settings. NDM research has led to innovations in system, training, and organizational design across a range of domains, including firefighting, power plant control, piloting, and nursing.

The occasion of two decades since the inception of NDM presents an opportunity to review the foundations, share retrospective perspectives, and offer articles that reflect progress in the field. We invite submissions dealing with any of these topics, including, but not limited to (a) review of the foundations of NDM, (b) retrospectives on NDM, (c) new or refined NDM models or

methods, (d) critical analysis of NDM models and methods, (e) outcomes and applications of NDM research (i.e., innovative designs, improved understanding of phenomena, etc.), and (f) integrative writing highlighting links between NDM and other researcher communities. Together, the collection of papers included in this special issue should provide an in-depth look at the past, present, and future of NDM research.

Manuscripts should be 25–30 double-spaced pages and will be subject to the standard JCEDM review prior to acceptance. View the Instructions for Authors at <http://www.hfes.org/web/PubPages/JCEDMauthorinfo.pdf>. Submissions are due **December 15, 2009**. Manuscripts should be submitted electronically via <http://mc.manuscriptcentral.com/jcedm>.

Acceptance notifications will be sent by March 31, 2010, and publication is expected by late 2010 or early 2011. Please address questions to the Special Issue Guest Editors: Rhona Flin, University of Aberdeen, [r.flin@abdn.ac.uk](mailto:r.flin@abdn.ac.uk), or Laura Militello, University of Dayton Research Institute, [laura.militello@udri.udayton.edu](mailto:laura.militello@udri.udayton.edu).

## STANDARDS

### Early Feedback Invited for ANSI/HFES 100 Update

By *Thomas J. Albin, Committee Chair*

I invite you to share your ideas for improving the next draft of the ANSI/HFES 100 standard at an informal meeting on Wednesday, October 21, at the 53rd Annual Meeting in San Antonio. Although this meeting is not part of the formal revision process, we are looking for ideas that will help to begin shaping the next revision.

Please submit your comments via e-mail to [hfes100@hfes.org](mailto:hfes100@hfes.org) no later than *October 28*. Your suggestions should clearly state what you think should be changed, added, or deleted to a new draft of the current standard. If a suggestion refers to a specific section, that section should be referenced. Be sure to state why you think the new content is advisable and include justification – especially peer-reviewed research – that can be cited to support it.

Because this process is not part of the formal revision of the current ANSI/HFES 100-2007 document, neither ANSI nor HFES procedures require formal responses to any suggestions submitted. However, once the formal revision process for the standard begins, you will have an opportunity to submit formal comments, to which you will receive a response.

It is anticipated that the formal process necessary to revise or reaffirm the current standard (produce the next draft) will begin in sufficient time to meet the ANSI-required five-year review in a timely fashion.

The time and location of the informal meeting in San Antonio will be published in the on-site program. I look forward to receiving your comments and suggestions, and to seeing you at the 53rd Annual Meeting.

### Legislation to Fund Medical Simulation Has Implications for HF/E Professionals

By *Mark W. Scerbo, Old Dominion University*

The U.S. Congress is working on a major overhaul of the nation's health care system. However, a separate piece of legislation that has the potential to benefit many in the human factors/ergonomics (HF/E) community has already been introduced.

The Enhancing SIMULATION (Safety In Medicine Utilizing Leading Advanced Simulation Technologies to Improve Outcomes Now) Act of 2009 (H.R. 855) was introduced by J. Randy Forbes (R-VA, 4th District) and Patrick Kennedy (D-RI, 1st District) on February 4. On March 17, Senator Tom Harkin (D-IA) introduced a companion bill in the Senate (S. 616). The Enhancing SIMULATION Act would do the following:

1. Instruct the Agency for Healthcare Research and Quality (AHRQ) to increase the use of simulation technologies and equipment in health care;
2. create medical simulation centers of excellence;
3. authorize grants for purchasing simulation training technology, incorporating medical simulation technology into curricula, and studying simulation-based methods for credentialing and accreditation; and
4. authorize \$50 million for 2010 and additional funding for subsequent years.

This legislation would greatly expand opportunities for evidence-based research in health care. It provides funding for much of the work that HF/E practitioners do in health care and related areas (e.g., safety, testing and evaluation, team training, virtual reality). Simulation technology allows HF/E researchers and educators in other high-risk domains to go about their work while reducing unnecessary risks.

Those interested in learning more about this legislation can find additional information, including how to contact members of Congress regarding H.R. 855 or S. 616, on the Advanced Initiatives in Medical Simulation (AIMS) Web site at <http://www.medsim.org/advocacy.asp> or the Society for Simulation in Healthcare (SSIH) Public Affairs & Government Relations Committee (PAGR) information page at <http://www.ssih.org>.

Rarely does Congress consider legislation that, if passed, could have such a direct impact on so many HF/E professionals. The Enhancing SIMULATION Act has the potential to benefit the HF/E community and improve the safety of our national health care system.

*This information is provided to HFES members for information purposes only and does NOT represent an official position or call to action from the Human Factors and Ergonomics Society.*

**US Army Natick Soldier Research,  
Development and Engineering Center  
(NSRDEC) – Supervisory Research  
Psychologist/Anthropologist/Physiologist**

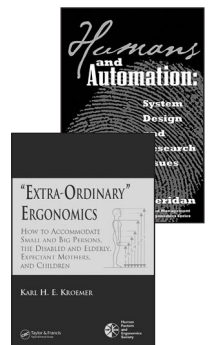
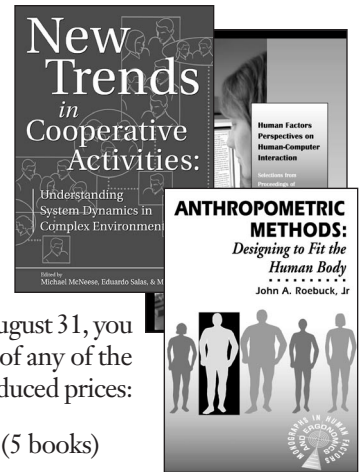
NSRDEC has the dedicated mission to maximize the Warrior's survivability, sustainability, mobility, combat effectiveness and quality of life by treating the Soldier as a System. NSRDEC is seeking to fill a Supervisory Research Psychologist/Anthropologist/Physiologist position responsible for planning, organizing, and directing science and technology in the human science arena as well as overseeing all Human Systems Integration efforts conducted by the Warfighter Science, Technology & Applied Research (WarSTAR) Directorate. The incumbent will serve as Chief, Human Systems Integration and Sciences Division and NSRDEC's top authority and consultant for all NSRDEC Human Science efforts including (but not limited to) the fields of anthropology, biomechanics, psychology, cognitive science, consumer choice and expectations, and human factors engineering. Incumbent will manage all WarSTAR-related Human Systems Integration and Human Science efforts involving clothing, equipment for individual protection, load carriage, combat rations and other areas as appropriate in support of NSRDEC project officers, Program/Project Managers, and other customers. The incumbent is responsible for ensuring systematic short and long-term planning of S&T efforts to meet the needs of future warfighters taking into account anticipated future Army capability needs and gaps as well as possible improvements due to advances in science and technology. The position is located in Natick, MA. The salary range is \$121,694 – \$153,200. A security clearance or the ability to acquire one is a requirement of the position. Must be a US Citizen.

To officially apply for this position, you must apply through the Army's Resume Builder. This process works by first entering your resume into the Army's database. To do this, go to [www.cpol.army.mil](http://www.cpol.army.mil) and click on Employment, then Build a Resume and follow the instructions. Once your resume is in the Army's Resume Database, you will need to go to the Army's Vacancy Announcement Board to self-nominate for this position. Go to the same website as above, click Employment, then Search for Jobs. The vacancy announcement you want to apply to is Vacancy Announcement Number: NEDB08015706DR, GS-15: Supvr Research Psychologist (0180), Supvr Research Anthropologist (0190), Supvr Research Physiologist (0413).

**Save 50%  
on Selected  
HFES Books**

Members, there's still time to take advantage of the summer sale on these great HFES books! Until August 31, you can purchase a single copy of any of the following titles at greatly reduced prices:

- Proceedings collections (5 books)  
*Human Factors Perspectives on Human-Computer Interaction* (very limited stock on hand)  
*Human Factors Perspectives on Warnings, Vol. 1 (1980–1993)*  
*Human Factors Perspectives on Warnings, Vol. 2 (1994–2000)*  
*The Ergonomics of Sound*  
*Designing for an Aging Population*
- *Anthropometric Methods*
- *Humans and Automation*
- *New Trends in Collaborative Activities*
- *Guidelines for Using Anthropometric Data in Product Design*
- *"Extra-Ordinary" Ergonomics*
- *Human Factors and Ergonomics Society: Stories From the First 50 Years*



Online credit card transactions are secure (<http://www.hfes.org/Publications/>); you can also download the printable order form from the HFES Web site ([http://www.hfes.org/Web/PubPages/pubs\\_order.pdf](http://www.hfes.org/Web/PubPages/pubs_order.pdf)) and mail or fax it to HFES, P.O. Box 1369, Santa Monica, CA 90406-1369; fax 310/394-2410. Contact Member Services at [membership@hfes.org](mailto:membership@hfes.org) if you have any questions.

**Bulletin**



Volume 52, Number 8 August 2009

Features Editor: Pamela Savage-Knepshield  
Communications Director: Lois Smith  
Production Editor: Scott MacDonald  
Advertising: R. C. Bublitz & Associates,  
800/485-5029; [dickbublitz@sbcglobal.net](mailto:dickbublitz@sbcglobal.net)

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)

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.