



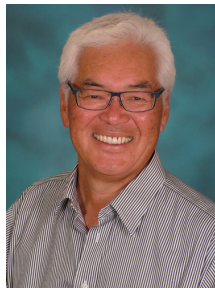
**HAPPY
HOLIDAYS
from HFES!**

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INSIDE HFES

New Beginnings

By Andrew S. Imada, President



A.S. Imada

Change is constant. We know that and expect it, but it's difficult to appreciate what it really means. As with many professional societies, after the HFES Annual Meeting, a new president takes over and we look forward to a new year, something different. It's most evident to me right now as the seasons change, and as my wife and I plan to move to be close to our family after living in the same place for a long time. But the truth is that things are always changing; we never notice it much. The exception is in others. We see how fast children grow and how everyone else changes.

The line that helps me appreciate change comes from the Dan Wilson song "Closing Time": "every new beginning comes from some other beginning's end." To me this means taking stock of where we are coming from and what we consciously want and have to change.

Where We Are Coming From

In terms of place, we are just coming from Chicago. In terms of organizational outcomes, we enjoyed a highly successful annual meeting. The 1,450 attendees exceeded our projections by 26%. The number of students attending the Annual Meeting increased by 22% over last year. It is so easy to overlook how well the conference is organized every year. That new beginning came years ago when we professionalized our conference management. We want to continue offering our members an event they want to attend.

In Chicago, I was encouraged and energized by the vibrancy of the many new people I met. I counted 72 people at the Past President's Forum on our future in 2025; many of you there were younger, newer members who are key stakeholders in the future. You bring great ideas, and we were privileged to listen to these suggestions.

Seeing people's willingness to generously commit their time and talent in the COTG, Chapter Presidents, and Executive Council meetings was comforting and shows that our future rests in competent hands. The collegiality and friendships from the Monday night reception, the networking event for the Product Design and Health Care TGs was fun and helped me understand why people want to be at our meeting. Seeing people we know and care about and being stimu-

lated by their ideas are things we appreciate and want to take with us to new beginnings. Not everything is changing.

Administratively, we have a well-run office with staff who are responsive to our needs and get the job done for us. Thanks to the stable leadership, we have competence and a corporate memory that helps create consistency in purpose. Financially we are projected to operate with a balanced budget in 2015 and continue to maintain sufficient cash reserves. As for governance, the Executive Council is examining strategic issues and, for me personally, is one of the finest groups that I have worked with in many years. We have the people and resources to make a journey into a new beginning.

So Why Change?

We were fortunate to have enjoyed strong leadership and a more forward-looking Council than I have seen in other organizations. Past Presidents Eduardo Salas and Frank Durso worked with Executive Director Lynn Strother and the Council to define a potentially “new normal” environment for us—financially, socially, technologically, and in ways that affect all professional organizations. This potential new reality got me to read several books about the future of membership organizations (Coerver & Byers, 2011; Sladek, 2011). It was enlightening. Working with Eduardo, Frank, and Lynn—and now with Bill Marras—we are trying to shape a coherent vision for an HFES future that is fit for the times.

Our well-run organization, with the kinds of people we enjoy working with, is perfectly built for a beginning that is come to an end. Open access, social networking, and immediate, asynchronous electronic communications are technological changes that demand different organizational responses. People have different expectations and relationships with associations and professional organizations. Paul Green’s presidential address touched on this sociological change. His citation of drops in civic organizations across the country is a trend that has continued. Socially, we are more likely to be “Bowling Alone” (Putnam, 2001).

Think about this: In the past, how many organizations did you (or your parents) identify with, including paying dues, attending meetings, wearing uniforms, congregating regularly, and buying the entire package of membership benefits? Contrast this with our current world, in which the Internet, e-mail, shopping, browsers, and acquiring music and books are nonmembership benefits and free. This is not about us, it’s about how all professional associations and societies deal with these sociotechnical changes. It’s not good enough that it’s not your father’s Oldsmobile; there are no more Oldsmobiles!

So What’s the New Beginning?

We will use the capabilities and strengths that we have to address these future challenges, to leverage the talents of our Executive Council to engage in a strategic discussion of where we are going, to allow our staff to execute these strategic directives, and to engage the membership to become active stakeholders in a participatory process. We will need everyone’s help to craft an organization that is fit for the future.

Let’s start with three new beginnings.

First, and most immediately, a task force led by Past President Waldemar Karwowski is completing a critical work product on the future vision for HFES. Commissioned by Eduardo Salas, this team has been surveying potential futures and will be returning their recommendations for HFES’s future vision. This will be submitted to the Executive Council prior to the midyear meeting and will enable the leadership to consider the recommendations and decide how to proceed. You will be hearing more about this work and how Council is proceeding throughout the year.

Second, we are making a conscious effort to expand HFES's influence in a way that creates greater impact for more people. Besides our successful health-care symposium, Tony Andre and Kermit Davis are pioneering a new conference geared for practice—ErgoX. However, unlike other practitioner events, this will be a single-track event with an opportunity for those in practice to have direct access to some of the most prominent professionals in our field. It will be an innovative event focused on translating our research and using the science we generate to improve systems in meaningful ways.

While there are financial benefits from the health-care symposium and ErgoX, their strategic implications position HFES to be more aligned with changing demands in the marketplace. More than just another revenue source, we envision this as part of a strategic initiative to implement what Bill Howell talked about in his 2001 presidential address, "The Human Factors/Ergonomics Parade: A Tale of Two Models" (see <http://www.hfes.org/Web/PubPages/Howell.pdf>).

Finally, at the Executive Council meeting we engaged the leadership with an exercise that asked them what they would never want HFES to stop being. It's an attempt to get at what we value most about HFES. The leaders identified 11 features that they would not want to give up. Using an affinity voting process, two key features emerged. The first key feature is the body of scientific knowledge that has come from research in the field. The second is the social network and professional community that HFES provides. Although these may seem self-evident, they are important considerations that the task force on the future of HFES should consider. Uncovering and sharing these data are part of the new beginnings.

Next Steps

I have two requests. First, that you become involved. Many people have stepped forward to offer their talents and energies. We cannot use all of your help at once, but we will need your input eventually. As in our electoral system, you have a right to complain only if you vote! Second, keep an open mind about the changes. None of us knows the future perfectly. This is a human endeavor that requires patience, participation, and openness. I often think about those who predicted the demise of civilization with the advent of the printed word!

Until the next time, I would like you to think about another Dan Wilson line about change. I have been pondering it as we prepare to move our home: "(It's) time for you to go out to the places you will be from."

Where will we be from someday?

Andrew S. Imada holds a PhD in industrial psychology from Ohio State University and is principal of A. S. Imada & Associates in Carmichael, California.

References

Coerver, H., & Byers, M. (2011). *The race for relevance: 5 radical changes for associations*. New York: ASAE/Jossey-Bass.

Putnam, R. D. (2001). *Bowling alone: The collapse and revival of American community*. New York: Simon & Schuster.

Sladek, S. (2011). *The end of membership as we know it*. New York: ASAE/Jossey-Bass.

HFES Inaugurates “Scout the Future” Program

HF/E is a broad discipline with many applications, and the future of HFES depends on understanding emerging trends, technologies, and challenges in multiple domains. In order to ensure that HFES has the best and most current information when making strategic planning decisions, the Executive Council has authorized a trial program called “Scout the Future.” Through this program, HFES members who are involved in cutting-edge technologies, who have particularly broad connections in diverse research and engineering domains, and/or who can spot a trend before it hits the mainstream can share that information with the Executive Council.

The Society will identify approximately 30 individuals to participate in the year-long trial. Specifically, nominations are sought for scouts who

- work in rapidly changing technical areas
- belong to other professional societies as well as HFES
- can identify potential HF/E research needed to support ongoing product development
- perceive social/technical shifts affecting emerging HF/E needs
- are broadly tuned in to changes in fields outside their main work domain
- are willing to communicate with HFES approximately monthly via short tweets and longer comments about what they see ahead

Executive Council will receive summarized information from the scouts, along with trending data from HFES Twitter feeds and LinkedIn blogs. The Council will then use that information to chart the near-term and long-term course of the Society.

If you're interested in becoming a scout or know someone who would be a good one, please send relevant information to Past Secretary-Treasurer Barrett Caldwell at bscaldwell@purdue.edu.

Membership Renewal Tax Benefit

Renewing your HFES membership by December 31 could provide you with some tax advantages. HFES is a 501(c)(3) nonprofit organization, and contributions over and above the Regular membership dues amount (\$215) qualify as a charitable deduction. (Please consult your financial adviser regarding your individual tax situation.)

You may wish to join the growing number of members who renew as Contributing (\$323), Supporting (\$430), or Sustaining (\$900) Members, and receive a potentially larger tax benefit. Such support is acknowledged in the HFES Directory and Yearbook, on the [HFES Web site](#), and at the Annual Meeting. These categories of membership are listed on your online membership renewal form.

To renew, log in at hfes.org and select “Renew My Membership for 2014.” To make an additional donation, simply fill in the amount at the bottom of the “2. Select Options” page during renewal.

If you need your login ID, please contact the Member Services Department at 310/394-1811, fax 310/394-2410, or membership@hfes.org.

Thank you for your continued support of HFES.

Get Ready to Submit Your Annual Meeting Proposals

HFES welcomes your submissions for the 2015 Annual Meeting. In January, the Call for Proposals will be posted at hfes.org. Proposals are due on March 9, 2015, and acceptance/rejection notifications will be sent in May. The meeting will be held October 26–30 at JW Marriott at L.A. Live in Los Angeles, California.

Case studies, debates, demonstrations, new methodologies, on-site experiments, and posters are welcome. HFES especially invites special-format sessions and presentations from invited speakers who bring their perspectives from areas related to human factors/ergonomics, identifying areas in which HF/E work is needed.

The Call for Proposals includes details such as the following:

- elements of the proposal (abstract, summary, etc.)
- descriptions of the different presentation formats (Discussion Panel, Lecture, Poster, Invited Symposium, Workshop, etc.)
- how to select the appropriate HFES [Technical Group](#) for your submission formatting guidelines (up to five pages in two-column format according to the template provided)
- creating “blind” submissions for peer review
- copyright policies
- where to submit proposals online

Papers that have been published previously or presented at another professional meeting may not be submitted. All research and analyses described in a proposal must be complete when the proposal is submitted. Papers that do not present completed work will be rejected; the sole exception to this policy is for student work submitted for consideration in the Student Forum track, in which case the proposer may report on work in progress.

One author of each accepted submission must attend the meeting to present the work. All presenters are required to pay the meeting registration fee.

For questions on the submission process, please contact Lois Smith (lois@hfes.org, 310/394-1811).

Bookmark the [2015 Annual Meeting page](#) for updates about registration, accommodations, tours, and more!

2013 HFES Financial Audit Report

The Human Factors and Ergonomics Society’s 2013 audited financial report, received by Secretary-Treasurer Barrett S. Caldwell in December 2014, was prepared by Castillo & West Accountancy Corporation. The firm audited the following statement of assets and liabilities – cash basis – of the Human Factors and Ergonomics Society (a nonprofit organization) at December 31, 2013, and the related statements of revenues and expenses – cash basis, and of changes in fund balance – cash basis, for the 12 months then ended. These financial statements are the responsibility of the Human Factors and Ergonomics Society’s management. The firm’s responsibility is to express an opinion on these financial statements based on its audit.

In addition to the regular Society funds, the firm reviewed the Alphonse Chapanis Award funds. These funds had a balance of \$29,542 at January 1, 2013; at December 31, 2013, the balance was \$32,866.

The firm conducted its audit in accordance with auditing standards generally accepted in the United States of America. Those standards require that the firm plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement.

An audit involves performing procedures selected depend on the auditor’s judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity’s preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity’s internal control. Accordingly, the firm expresses no such opinion.

An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements. The firm believes that the audit evidence obtained is sufficient and appropriate to provide a basis for its opinion.

In the firm's opinion, the financial statements referred to above present fairly, in all material respects, the assets, liabilities, and fund balances of the Human Factors and Ergonomics Society, as of December 31, 2013, and its revenue, expenses, and the changes in its fund balances for the 12 months then ended, in conformity with the basis of accounting described in Note 1.

Statement of Assets and Liabilities – Cash Basis December 31, 2013

Assets

Cash on deposit	
Checking/savings	\$230,049
Total cash on deposit	\$230,049
Investments	
Charles Schwab, at market value	\$712,471
Vanguard STAR Fund, at market value	\$176,318
Total investments	\$888,789
Total assets	\$1,118,838

Liabilities and Fund Balance

Liabilities	
Reserve for current payable	\$12,000
Other current liabilities	\$832
Due to TG	\$9,381
Payroll liabilities	\$1,083
IEA donations	\$656
Total liabilities	\$23,952
Fund balance	\$1,094,886
Total liabilities and fund balance	\$1,118,838

Statement of Changes in Fund Balance – Cash Basis for the 12 Months Ended December 31, 2013

Balance - January 1, 2013	\$1,151,657
Add: Excess of revenues over expenses	(\$56,771)
Balance - December 31, 2013	\$1,094,886

Statement of Revenues and Expenses – Cash Basis for the 12 Months Ended December 31, 2013

Revenues

Individual memberships	\$635,282
Sustaining memberships	\$11,400
Publications	\$500,510
HFES Institute	\$14,711
Annual Meeting	\$180,850
Other Meeting	\$191,355
Placement	\$28,369
Net unrealized gain on investments	\$27,438
Miscellaneous	\$6,126
Total revenues	\$1,596,041

Expenses

Publication Expense:	
<i>HFES Bulletin</i>	\$844
<i>Human Factors Journal</i>	\$29,788
<i>Directory and Yearbook</i>	\$19,950
<i>Ergonomics in Design</i>	\$4,222

Books	\$3,666
Marketing	\$5,247
Other publication expense	\$9,450
Salary and administrative costs	\$332,014
Total publication expense	\$405,181

Member Services:

Mailings expenses	\$9,130
Placement service	\$5
Committee and other (Note 4)	\$274,618
Annual Meeting	\$115,790
Other Meeting	\$133,382
Computer, Web site, and related expenses	\$35,251
Interorganizational	\$39,530
Salary and administrative costs	\$380,222
Total Member Services	\$987,928

General and Administrative Expense:

Salary and administrative costs	\$259,702
Total General and Administrative Expense	\$259,702

Total Expenses	\$1,652,811
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Excess of revenue over expenses	(\$56,770)
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Note 1 – Summary of Significant Accounting Policies

This summary of significant accounting policies of Human Factors and Ergonomics Society (the organization) is presented to assist in understanding the organization's financial statements. The financial statements and notes are representations of the organization, which is responsible for their integrity and objectivity.

Activity. The organization is a nonprofit entity. The organization is an interdisciplinary organization of professional workers concerned with the role of humans in complex systems, the design of equipment and facilities for human use, and the development of environments for comfort and safety. The membership is composed of psychologists, engineers, physiologists, and other scientists from the United States and around the world.

Human Factors and Ergonomics Society promotes research and the application of human factors in the design, development, use, and evaluation of machines, systems, environments, and devices.

Basis of accounting. The organization's policy is to prepare its financial statements on the cash basis of accounting; consequently, certain revenues are recognized when received rather than when earned, and certain expenses and purchases of assets are recognized when cash is disbursed rather than when the obligation is incurred.

Note 2 – Property and Equipment

It is the organization's policy to expense all capital assets purchased throughout the year.

Note 3 – Reserve for Current Payable

This represents a segregation of surplus for bills due at December 31, 2013. This represents \$12,000 for miscellaneous payables.

Note 4 – Committee and Other

IEA Representatives	\$7,655
Awards	\$2,861
Government Relations	\$137,251
Outreach Advisory	\$6,861
Student Affairs	\$10,495
Miscellaneous	\$8,842
HFES Institute	\$45,369
Executive Council	\$55,284
Total	\$274,618

Note 5 – Pension Plan

The Organization has a Tax-Deferred Annuity Plan using

Teachers Insurance and Annuity Association- College Retirement Equities Fund [TIAA-CREF] Annuities that meet the requirements of section 4 03 (b) (1) of the Internal Revenue Code.

Benefits are provided by individually insured contracts issued by TIAA-CREF to each participant. The guaranteed rate basis for premiums applied to TIAA Retirement Annuity contracts is in accordance with the terms of the participant's individual annuity contract.

The plan is a defined contribution plan, which covers all full-time employees with two years of service. The plan calls for contributions of 10% of compensation for participants for the first three years in the plan and 12. 5% of compensation thereafter, except for employees earning in excess of \$100,000 then contribution is capped at 10% of compensation.

For 2013, the company contributed \$55,863 to the plan.

Note 6 – Investments

The organization has the following funds with the Vanguard Group and Charles Schwab:

	<u>Cost</u>	<u>Fair Market Value</u>
7,195.906 shares of Vanguard STAR Fund	\$140, 211	\$176,318
Charles Schwab	\$712,471	\$712,471

Note 7 – Income Tax Status

The organization is exempt from federal income tax under Section 501(c)(3) of the Internal Revenue Code. However, income from certain activities not directly related to the organization's tax-exempt purpose is subject to taxation as unrelated business income. For 2013, the organization had no tax on unrelated business income. In addition, the organization qualifies for the charitable contribution deduction under Section 170(b)(1)(A) and has been classified as an organization other than a private foundation under Section 509(a)(2).

STANDARDS UPDATE

ISO/TC 159 Standards Update for December

By Daryle Gardner-Bonneau, Chair, U.S. TAG to ISO/TC 159

The items presented in this article concern news relevant to ISO/TC 159 standards activities and include upcoming meetings, newly published standards, new standardization projects, and draft standards currently being balloted.

Except for newly published standards, titles of standards are abbreviated in this listing, but you can obtain the complete title for any standard by visiting the HFES [Standards Web page](#) and then clicking on the Subcommittee (SC) Technical Advisory Group (TAG) that is involved with the standard in which you're interested. Clicking that link will display a graphic of the SC's structure and a listing of all the projects and standards of that subcommittee. You can also purchase standards and search full titles and abstracts by going to the [ANSI Store](#) or the [ISO Store](#) and searching by the document's number (e.g., ISO 24504).

The contacts whose e-mail addresses are provided below (i.e., Daryle Gardner-Bonneau, Robert Fox, and Jim Williams) welcome your inquiries and your participation in these activities.

The listings use the following ISO abbreviations:

TC = Technical Committee

SC = Subcommittee

WG = Working Group

CD = Committee Draft

DIS = Draft International Standard

FDIS = Final Draft International Standard

TR = Technical Report

NWIP = New Work Item Proposal

PAS = Publically Available Specification

Items new this month are preceded by *.**

***** Special Solicitation**

The U.S. TAG to ISO/TC159/SC4 (Ergonomics of Human System Interactions) seeks new TAG members and/or U.S. experts to review documents and participate in projects in the following working groups: WG6 (Human-Centered Design Processes for Interactive Systems), WG9 (Haptic and Tactile Interaction Systems), and WG10 (Accessible Design for Consumer Products). Be-

cause more and more international meetings are taking place via WebEx, travel is not a requirement for participation as a U.S. expert in a working group. If you are interested in participating in standards work in any of the above-listed topical areas, please contact Jim Williams at ergojim@earthlink.net.

Projects

SC3 – Revision of ISO 14738 – Safety of Machinery – Anthropometric requirements for the design of machinery workstations (joint writing group formed from the manual handling and anthropometry working groups to do this work). Contact robert.r.fox@gm.com.

SC3 – Extension of ISO 11228 series of standards to manual agricultural work. Contact robert.r.fox@gm.com.

SC4 – ISO 9241-332 – Autostereoscopic displays. Contact ergojim@earthlink.net.

Draft Documents Released for Comment and Vote

SC3 – ISO/CD 7250-1 – Anthropometry – Part 1 – Body measurements and landmarks (updating of anatomical landmark definitions to be compatible with 3-D scanning systems). Contact robert.r.fox@gm.com.

SC3 – ISO/DIS 20685-2 – 3-D scanning methodologies – Evaluation protocols of surface shape and repeatability of relative landmark positions; due **January 1, 2015**. Contact robert.r.fox@gm.com.

*****Upcoming Meetings**

Standard/Group	Date	Location/Description	Contact
TC159/SC4/WG6	December 17, WebEx half-day meeting (8:00 a.m.–12 noon EST)	Finalize revision of ISO 9241-11 (usability) and 9241-220 (human-centered design process)	JDNBonneau@charter.net
ISO/TC159/WG2	February 24–26, 2015	Seoul, South Korea – Work on revision of ISO/TR 22411 (ergonomic data for accessibility)	JDNBonneau@charter.net
ISO/TC159/SC4/WG5	March 2–4, 2015	San Francisco, CA – Continue work on ISO 9241-112 (presentation of information) and ISO 9241/125 (visual presentation of information)	ergojim@earthlink.net
ISO/TC159/SC4/WG6	March 16–18, 2015	Berlin, Germany – Process comments on revisions of ISO 9241-11 (usability) and ISO 9241-220 (human-centered design pro-	JDNBonneau@charter.net

ISO/TC159/SC1/WG5	March 19–20, 2015	cess) Berlin, Germany – Continue development of ISO 27501 (management level ergonomics process standard) and begin development of NWIP for a specialist-level ergonomics process document	JDNBonneau@charter.net
ISO/TC159/SC4/WG6	April 23–24, 2015	Baltimore, MD – Plenary meeting	JDNBonneau@charter.net

STUDENT SPOTLIGHT

Getting Your Student Chapter to the Annual Meeting: The Michigan Experience

By Paul Green, UM-HFES Student Chapter Faculty Adviser, Rosemarie Figueroa, UM-HFES Student Chapter President, and Alicia Napoleon, UM-HFES Student Chapter Secretary

Getting students who are not presenters to attend the HFES Annual Meeting is always a financial challenge. Presenters are typically funded by their adviser’s research projects, which are sometimes supplemented by university travel funds, but these funds can be restricted to graduate students. Depending on the location and the number of days of the meeting, the cost of registration, airfare, hotel, and food is typically about \$1,500 per person.

Because the Annual Meeting was in Chicago this year, students from several Midwest universities were not burdened with airfare costs, significantly reducing the total cost to attend. Because the Annual Meeting has not been within driving distance of Ann Arbor in 15 years, the University of Michigan HFES Student Chapter (UM-HFES) launched an initiative to get students to this year’s meeting. Some useful lessons follow.

Establish a Leader, a Committee, and Subcommittees to Begin Planning at Least Nine Months in Advance

The leader was the current UM-HFES president, and the committee identified one to three people to lead subcommittees for transportation, lodging, meeting registration, the dinner sponsored by the UM-Greater Chicago Alumni Club, and the annual University of Michigan Dinner. Google Drive and Dropbox folders were created to share information, collect receipts, and prepare documents (including a proposal sent to companies), e-mail drafts, and sponsorship and reimbursement agreements distributed to the sponsored students.

Although increasing UM student attendance at the meeting was discussed almost a year in advance, activities were minimal until the summer of 2014, which was a bit late. The late start was due to an initial lack of students to support this initiative as well as an underestimate of the time needed to complete all the necessary work. Beginning preliminary planning at least nine months in advance would provide time to recruit initiative organizers, some of whom will be off campus and not available during the summer.

Set an Attendance Goal and Talk It Up

The original goal was to convince every member of UM-HFES and require every member of Paul Green's Automotive Human Factors (IOE 437) class to attend the meeting. Attendance could be required only if it were free. To meet the attendance goal, we set the estimated budget at around \$26,000—a significant amount, given that the highest typical annual budget for a student chapter is \$500. Because fundraising started late (in August), funds were not sufficiently available in advance, so the course requirement was dropped. However, an impressive \$17,500 was raised in less than one month, and a total of 25 students attended, far more than the seven to ten who typically attend.

To provide perspective, most of the students in the IOE 437 class are undergraduates, and convincing them of the importance of professional involvement and conferences is a challenge. They often do not appreciate the value until after they attend. During and after the Annual Meeting, students who did attend remarked on how helpful it was in learning more about their fields of interests and completing course assignments.

Plan a Fundraising Effort

The fundraising effort relied on several well-edited documents that described UM-HFES and asked for support, explained why support was being requested, provided a detailed budget, stated how this activity was organized (e.g., committees and their roles). It also listed what UM-HFES could provide in return (putting company logos on UM-HFES T-Shirts, hosting sponsor-specific activities, providing student recruitment opportunities, etc.). Funds were obtained from the College of Engineering, the IOE Department, faculty discretionary funds, alumnus Richard Jagacinski, and members at two companies (Paul Franz and Tim Rhoades at Applied Safety and Ergonomics, and Stan Caplan at Usability Associates).

Develop Plans to Keep Costs Low

One could travel between Chicago and Ann Arbor by train for \$62 thanks to Amtrak's special HFES Annual Meeting rate; however, some students decided to go by bus or carpool. Carpoolers found parking rates as low as \$20/night, far below the \$60/night rate near the meeting venue. To simplify accounting, all students received up to \$62 for transportation, no matter what method of transportation was used.

Coordinate with the Local Alumni Club

Coordination began by contacting the president of the local university alumni club guided by the University Alumni Association staff, an underutilized resource. A plan to have some of the 22,000 UM alumni living in the Chicago area provide housing did not pan out, but if there had been a UM-HFES subcommittee coordinating with them and the alumni association staff, the outcome could have been different. The Chicago Metropolitan Chapter did sponsor a pizza dinner following the student reception. It was attended by 20 students from UM, some students from the University of Puerto Rico HFES student chapter, and seven UM alumni. In addition, a member of UM-HFES volunteered to plan a social at a nearby pub immediately after the pizza dinner. Approximately 70 students from different student chapters attended. These were great networking events.

Establish Some Minimal Attendance Requirements

There was some faculty resistance to sending undergraduates for free to the Annual Meeting without any requirements. Therefore, to be reimbursed, undergrads had to attend at least two days of the meeting. All students were required to attend a mass meeting a week prior the Annual Meeting, specific meeting events such as the student reception, and a specified number of ses-

sions. After the Annual Meeting, students completed a short survey and attended a follow-up meeting where they all shared pictures, videos, and their meeting experiences.

Plan A Special Dinner

Most universities have dinners for students, faculty, staff, and alumni at the Annual Meeting. For decades, the University of Michigan Dinner has been on Wednesday night of the meeting week at 7:30 p.m., and this year was no exception. For the first time, students made an extra effort to get sponsorship for this dinner, which was provided by the IOE Department. Instead of the typical 30–40 attendees, there were 56 this year, and departmental funding—along with the number of attendees—allowed us to obtain a complimentary private room. Even though e-mailed RSVPs were requested (40 responded), a sign-up sheet at the meeting generated buzz and encouraged others to attend.

Other differences this year included a shift from one large table to smaller tables of eight and nine, and a buffet format, all of which promoted interaction among attendees. Organizers mixed students and alumni when attendees gathered at the meeting hotel and when people sat down for dinner.

After 20 minutes of informal interactions at the beginning of dinner, everyone introduced themselves and shared an interesting and unique fact about their lives. Students also described their fields of study. Alumni reconnected with professors for whom they had worked and studied, and opportunities in both academia and industry were shared with students. Everyone enjoyed getting to know one another so much that after dessert, most attendees went to other tables to chat. It was not until 10:30 p.m. that most people left.

Utilize University Administrative Resources

UM-HFES registered this initiative as a University of Michigan sponsored event so that students were covered by the university's insurance and sponsors could receive a gift receipt for tax purposes. This led to very beneficial communication and advice from the College of Engineering staff, who helped UM-HFES identify potential sources of support inside the university and promoted the initiative among IOE alumni.

Closing Thoughts

Our experience shows that it is possible to substantially increase the number of students attending the HFES Annual Meeting, especially if transportation costs can be reduced (by carpool, bus, or train) or housing costs can be lowered (by having four students per hotel room) or eliminated (by staying with alumni). We wanted students to learn about HF/E and to experience a professional conference. There is no doubt that for many it was an incredible experience. However, even if they do not pursue a career in HF/E, those who attended the Annual Meeting now can make compelling arguments for why they need to join professional societies and attend conferences, from which everyone benefits.

With help from many people, UM-HFES was able raise 35 times its normal budget in less than a month, consequently increasing attendance at the HFES Annual Meeting by a factor of 2.5. We encourage other student chapters to pursue similar initiatives and aim high.

Paul Green is a research professor at the University of Michigan Transportation Research Institute in the Driver Interface Group and a faculty member in industrial and operations engineering. He is an HFES Fellow and a past president, as well as a BCPE Certified Human Factors Professional. Rosemarie Figueroa is a PhD candidate in industrial and operations engineering at the University of Michigan. Rose holds a BS in industrial engineering from the University of Puerto Rico and a, MS in industrial and operations engineering from the University of Michi-

gan. Alicia Napoleon is an MSI candidate in the School of Information at the University of Michigan specializing in human-computer interaction.

UCF's Windy City Student Social a Success

By Gabriella M. Hancock, University of Central Florida

Professionals and students from across the globe blew into the Windy City for the 2014 HFES Annual Meeting during the last week of October. Concomitant with this spirit of fortifying ties within the wider HFES community, the University of Central Florida's (UCF) HFES Student Chapter hosted a networking event on Thursday night during the meeting with the generous support of the following sponsors: UCF's Psychology Department, UCF's Institute for Simulation & Training, alumna Haydee Cuevas, Design Interactive, and the Tri-County USA Pool League. An open invitation was extended to all meeting attendees. The event was well attended with almost 60 guests, 37% of whom were first-time attendees of the Annual Meeting! Such a successful turnout afforded a number of professional development opportunities for all student participants.

Students were able to network in an informal atmosphere with a diverse host of experts, practitioners, and mentors. The Thursday night timeslot allowed students not only to meet new people, but also to reconnect with any acquaintances they had met over the course of the meeting. Students were able to mingle with representatives from three of the major HF/E domains: academia, the military, and industry. The majority of attendees came from nearly 20 universities.

Representatives from the Army Research Laboratory provided perspectives concerning professional development in the military domain. Professionals from HF/E-related industries attended from State Farm, the Ford Motor Company, Volvo Group Trucks Technology, and Boeing Research and Technology. Boeing representatives shared future internship/employment opportunities at the forthcoming opening of a Research and Development center in Charleston, South Carolina, and also provided giveaways such as T-shirts and sticky notes.

The UCF HFES Student Chapter thanks these professional attendees for sharing their time, experience, and perspectives with our HFES student members.

Participation in this type of event offers HFES student members three opportunities for professional development:

1. fostering potential connections for future interdisciplinary research;
2. increasing familiarity with potential employers and employment opportunities; and
3. helping to identify professionals who could be prospectively recruited for guest speaking engagements.

For these reasons, we heartily recommend all meeting attendees to be on the lookout for our (and similar) social networking events at next year's HFES Annual Meeting in sunny Los Angeles!

Gabriella M. Hancock is a PhD candidate at the Performance Research Laboratory, Department of Psychology, University of Central Florida.

Facilitating Collaboration and Creating Multidisciplinary Research Opportunities

By Isis Chong, *California State University, Long Beach*

This article summarizes comments and advice from the “Enabling Interdisciplinary Research” panel at the 2014 Annual Meeting Student Career and Professional Development Day on October 27. This panel was chaired by Baron Summers (Capella University) and featured panelists Stephen Fiore (University of Central Florida), Kelly Hale (Design Interactive), Joseph Keebler (Wichita State University), Dan Nathan-Roberts (San Jose State University), and Shawn Weil (Aptima).

Why Interdisciplinarity?

The panelists remarked that to solve problems and answer questions they encounter, researchers must reach beyond their own disciplines to use the varying lenses that are provided in areas of research with which they may not be familiar. Given the interdisciplinary nature of human factors/ergonomics, it is important to understand the importance of interdisciplinary collaboration and how to successfully conduct this kind of research.

How To Be Successful in Interdisciplinary Research

Individuals must first understand their own abilities and interests. The panelists posed the following key questions to ask oneself:

- What do I know (or not know) about this field?
- What can I offer or bring to this team?
- What do I want to learn through collaborating with others?

By evaluating what one’s role is going to be in a research team, one can better determine if interdisciplinarity is a good fit. Following this introspective process, students should attend relevant talks or events, seek out novel work, and network to expand their knowledge and opportunities. A few of the panelists noted that the most interesting opportunities arose when they stepped out of their comfort zones and stepped into fields unfamiliar to them.

Factors to Consider

Although there are many benefits to conducting interdisciplinary research, panelists cautioned that one must keep in mind that not all situations may be suited for this kind of collaboration—or, as Shawn Weil called it, “the dark side of interdisciplinarity.” First, if there is a quickly approaching deadline, there may not be enough time for collaborators from different disciplines to translate their work and present it to others. With interdisciplinary research, all involved parties must be as informed as possible, but this requires time that may not be available. Second, disciplinary biases may lead to obstacles that prevent fruitful collaboration among participants. Third, one must also consider the possibly differing institutional incentives of other participants. Finally, one must consider each individual’s motivation and goals beyond the incentives he or she may receive.

In conclusion, the panel provided many insights on interdisciplinary research and considerations for collaborations. When such opportunities arise, students are highly encouraged to take them.

Isis Chong is a second-year master's student in human factors psychology at California State University, Long Beach.

Recruiting the Next Generation of HF/E Professionals at a High School Careers Event

By R. J. B. Hutton, BAE Systems Advanced Technology Centre

I was recently asked to attend a careers evening at my old high school in the United Kingdom. It's the first time I have had the opportunity to participate in one of these events, and only the second time my school had presented one. I was keen to represent HF/E as a career option to some impressionable young men (it is an all-boys school).

I have spent a fair amount of time with undergraduates in psychology classes, discussing various aspects of applied cognitive psychology, but I have never been faced with trying to describe my job to a bunch of youngsters who didn't even know which university they want to attend, or what subjects they want to study, let alone trying to understand a multidisciplinary area like human factors. I spent some time browsing the HFES Web site trying to find some careers guidance materials, but I mainly found content directed at university graduates. Similarly, the Institute of Ergonomics and Human Factors (IEHF) in the United Kingdom is focused on young adults who are slightly further along in their life decisions. The IEHF does have a nice glossy brochure that they send to university careers centers available on their Web site. HFES does not, but Lois Smith managed to dig out some brochure material from HFES and turn it into something I could print out to give to the school careers adviser.

I wasn't sure how I was going to engage these boys with the interesting and varied activities of an HF/E professional and was even more confused when I realized that I was being put on a table under the "STEM" (science, technology engineering, and mathematics) label, where the majority of the boys would be focused on physics, chemistry, math, and possibly information and communications technology in school. Certainly no psychology at that stage in their education. However, I was very pleasantly surprised by the degree to which the young men who sat at my table were informed on topics relating to design and engineering—far better informed than I ever was at that age!

We discussed a broad range of engineering and technology challenges with the representatives of automotive design and engineering who were also at our table. We covered topics as varied as artificial intelligence, motorbike design, and satellite navigation systems, and I tried to represent the HF/E challenges associated with these difficult engineering problems. I was encouraged by the interest and curiosity displayed by these well-informed, inquisitive young men. I was also encouraged by discussions of some of their school design projects in which end users were consulted about the designs that they were creating. However, despite the engaging evening, I did walk away with a feeling of dissatisfaction.

Had I managed to convey the amazing opportunities and challenges that we frequently face as HF/E specialists? Had I given good answers to questions about what to study at school or university in order to prepare to pursue a career in HF/E? Was I talking to the right group of people? Psychology is an up-and-coming subject in high schools, but not one psychology student was seated at the STEM table. Most of them knew about "engineering" broadly speaking, but few appreciated the breadth of even an engineering degree. How was I supposed to convey the multidisciplinary nature of what I do? What sort of advice should I be giving these young men in order to plant the seed so that one day, after their next round of exams, they might sit up and say, "Hmm, that human factors stuff sounds like fun. I can see myself doing that. I think I'd like to give it a go...."

As I drove home at the end of the night, reflecting on what I could have and should have said, I realized that it's probably not realistic or desirable to be trying to specialize that early in one's education. The skills and knowledge required are gained from a broad range of sources:

- experiencing various jobs and challenges in work experience over school breaks and in part-time jobs
- understanding the broad challenges of engineering and the implications for people and society
- understanding the application of the scientific method to identify and understand problems and their solutions
- applying critical thinking in analyzing problems and evaluating evidence
- being comfortable with mathematics and its application to applied problems
- learning that writing effectively for others is as important as being able to crunch numbers or knock out code

Are schools achieving this through their academic and extracurricular activities? Are they providing the opportunities for pupils to develop some of these fundamental but widely transferable skills? Some of the questions that we deal with in HF/E should probably not be introduced too early, when more fundamental skills need to be acquired. But what is the right time to grab the attention of the next generation of HF/E scientists and practitioners? How do we communicate the challenges of HF/E and the benefits of being a part of such an interesting and valuable field to future HFES members?

I'm sure there are probably some HF/E educators who have thought about these challenges far more than I have. I would appreciate some ideas about resources for these sorts of careers events for the future, and I think that they should be available in the careers section of our Web site to engage young people at all stages of their development. Who knows when the seed might begin to grow?

Rob Hutton is a group leader and principal HF scientist at BAE Systems Advanced Technology Centre (formerly the Sowerby Research Centre) in Filton, UK. His current work is primarily for the UK MoD exploring applications of cognitive systems engineering principles to the design of military information systems in several domains, including intelligence analysis, maritime command and control, and land headquarters. Rob can be contacted at rjbhutton@yahoo.com.

Student Awards

The HFES First-Year Student Travel Honorarium Program helps students entering HF/E academic programs travel to the HFES Annual Meeting. The program supports nonpresenting, first-year students who normally would not attend the meeting because of limited resources. HFES is pleased to recognize the 2014 honorarium recipients:

- Gregory Garrett (Texas A&M University) – Environmental & Occupational Health
- Wil-Johneen V. Ardoin (Texas A&M University) – Interdisciplinary Engineering
- Ja Young Lee (University of Wisconsin – Madison) – Industrial Engineering

Several HFES technical groups conduct annual Student Best Paper Award competitions. Congratulations to the following recipients.

Aging Technical Group

Baekhee Lee (Pohang University of Science and Technology) received the Best Student Paper for “Age and Gender Differences in Force Control Capabilities by Force Control Phase.” Bridget Lewis (George Mason University) was awarded the Arnold Small Scholarship.

Computer Systems Technical Group/Internet Technical Group

The UX Day Best Paper Award (sponsored by United Technologies) was presented to Sean Hayes, Eli Hooten, and Julie Adams (Vanderbilt University) for their paper, “Tablet Interaction Accuracy and Precision: Seated vs. Walking.” This award was open to all presenters at the Annual Meeting, not just students.

Cognitive Engineering and Decision Making Technical Group

Two papers tied for first place in the Best Student Paper Award competition: “The Effect of Visual Cues on How People Handle Interruptions” by Stephan Huber, Michael Weng, Tobias Grundgeiger, (University of Wuerzburg), and Penelope Sanderson, (University of Queensland); and “No Time, No Problem: Mental State Attributions Made Quickly or After Reflection Do Not Differ” by Emilio J. C. Lobato, Travis J. Wiltshire, Sarah Hudak, and Stephen M. Fiore (University of Central Florida). The third-place paper was “An Investigation of Human Decision Making in a Human-Robot Team Task” by Elizabeth Phillips, Scott Ososky, and Florian Jentsch (University of Central Florida).

Perception & Performance Technical Group

“The Effects of a Workload Transition on Stress over Time” by Erik Prytz (Linköping University) was the Best Student Paper.

Surface Transportation Technical Group

The Best Paper Award went to “Variations on a Theme: Topic Modeling of Naturalistic Driving Data” by Eleise McLaurin, Anthony D. McDonald, John D. Lee (University of Wisconsin-Madison), Nazan Aksan, Jeffrey Dawson, Jon Tippin, and Matthew Rizzo (University of Iowa).

Virtual Environments Technical Group


The Best Student Paper was awarded to ShiXu Liu, Shengji Yao, and Allan Spence (McMaster University) for “Comparison of Caffeine and Music as Fatigue Countermeasures in Simulated Driving Tasks.”

CALENDAR

[Inaugural International Convention of Psychological Science \(ICPS\)](#), March 12–14, 2015, Amsterdam, The Netherlands.

[18th ACM Conference on Computer-Supported Cooperative Work and Social Computing \(CSCW 2015\)](#), March 14–18, 2015, Vancouver, BC, Canada.

[2015 Symposium on Human Factors and Ergonomics in Health Care: Improving the Outcomes](#), April 26–29, 2015, Baltimore, MD.

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