

## JCEDM: Papers of the Past, Present, and Future

By Amy R. Pritchett, Editor in Chief, JCEDM



As I phase in as editor in chief of the *Journal of Cognitive Engineering and Decision Making (JCEDM)*, I am frequently asked, “Just what kind of papers do you want for this journal, anyway?” My answer is shaped by the perspective of my career in aviation safety. From the point of view of my aerospace engineering colleagues, metaphorically speaking, I shamelessly hitch up my skirt and dangle my feet in the running stream of human factors/ergonomics whenever it will help someone design better pilot training, better operating procedures and practices, and better flight decks and controller stations. However, I also dabble in complexity theory, system dynamics, control theory, and computational methods.

In the same way, I see *JCEDM* continuing with a problem-driven perspective that draws eclectically (or systematically) from any and all areas that can provide insight. Thus, CEDM research is defined not by an exclusive focus on human factors, or on a particular research method or domain, but by the communities they impact, which may span research, engineering, design, and operations. Such an impact can have three components:

- a. *It impacts a target domain.* A paper in *JCEDM* using aviation as its target domain may change, for example, how researchers view the role of the pilot in an automated cockpit, how designers frame their task of creating autopilot interfaces, how airlines train their pilots, and how we investigate accidents. Such an impact requires research that tackles a real problem, no matter how messy, and values ecological and task validity in its research methods.
- b. *Other domains benefit too.* *JCEDM* research is not limited to point solutions. Tough problems underlie our research in terms of understanding the human contribution to complex work domains and demonstrating rigorous, repeatable methods in, say, aviation that others can apply to, say, medicine. Indeed, some of our models and methods are intended to be formative (to reference Vicente’s terminology), and thus the measure of their worth is whether they are systematically helpful to those designing teams, operations, training, and technologies.
- c. *It understands and values the human contribution within complex work environments.* Having flown jumpseat extensively in air transport cockpits, I am in awe of pilots’ expertise, even as I know my developments may change what we demand of them (for the better, I hope). Although I cannot explain their performance in terms of one behavior, one theory, or performance at one task, or fully replicate it in a laboratory, I must recognize the myriad ways in which they contribute to the system with a hearty understanding of the relevant HF/E literature—and in return, I may also identify where further fundamental HF/E research is required in the lab to support further extension of the messy complexities of real operations.

There is no formula for weighting these three contributions; one study may focus more on influencing a target domain or problem, whereas a second study may focus more on generalizable methods to support design, and the third may explore how humans pattern their decision making in quick and dangerous situations. Each paper in *JCEDM* can (and should) identify its own “sweet spot,” balancing ecological and task validity, generalizability, and in-

sight into the human contribution within complex work environments. Thus, I invite researchers from a number of domains—and designers too—to consider what impact they would like to have and the most rigorous approach to achieve it.

Reviewing the papers published by *JCEDM* since its first issue in 2007, I am struck by the advances they reflect. The latest issue, out this June, has made me excited to step in as incoming editor of the journal because it tackles difficult, important problems: How do experts make decisions using complex, uncertain information? How can we help them visualize uncertainty and risk, especially in difficult, safety-critical situations? How can we develop systematic—even computational—models to help designers address issues with automation identified in the human factors/ergonomics literature?

Scanning past *JCEDM* issues has also caused me to look back further to some of my favorite papers in other journals and books, which, I think, reflect the philosophy and spirit of *JCEDM*—and which, had *JCEDM* existed then, would have been sought out by its editors. Some of the papers are cracking good reads, each providing a novel look at the human as situated in a complex environment and evoking new approaches to design:

Gibson, J. J., & Crooks, L. E. (1938). A theoretical field-analysis of automobile-driving. *American Journal of Psychology*, 51, 453–471.

Kirlik, A. (1998). Everyday life environments. In W. Bechtel & G. Graham (Eds.), *A companion to cognitive science* (pp. 702–712). Malden, MA: Blackwell.

Other papers integrate across disciplines, demonstrating to engineers and designers how their formalisms can be adjusted to account for key aspects of human behavior:

McRuer, D. T., & Jex, H. R. (1967). A review of quasi-linear pilot models. *IEEE Transactions on Human Factors*, 8, 231–249.

Javaux, D. (2002). A method for predicting errors when interacting with finite-state systems: How implicit learning shapes the user’s knowledge of a system. *Reliability Engineering & System Safety*, 75, 147–165.

Still other papers break down divisions between divisions, such as highlighting the dualism between display design and design of the control task it is used for:

Mulder, M., Veldhuijzen, A., van Paassen, R., & Bennani, S. (2002, August). Fly-by-wire control and tunnel-in-the-sky displays: Towards a task-oriented control display system. *Presented at the AIAA Guidance, Navigation and Control Conference*, Monterey, CA.

Finally, other researchers went out into the world and observed problems and behaviors that hadn’t even been recognized before the paper, and couldn’t be ignored afterward:

Wiener, E., & Curry, R. (1980). Flight-deck automation: Promises and problems. *Ergonomics*, 23, 995–1011.

Klein, G. A., Calderwood, R., & Clinton-Cirocco, A. (1986). Rapid decision-making on the fireground. In *Proceedings of the Human Factors and Ergonomics Society 30th Annual Meeting* (pp. 576–580). (NOTE: *JCEDM* did publish this paper, some 24 years after its original conference presentation; see *JCEDM*, 4, 2011, pp. 186–209.)

Of note, this list spans a range of domains and a range of communities. Thus, *JCEDM* has a role not just within the CEDM Technical Group but for all of HFES, and not just within HFES but also as outreach from HFES to other communities and disciplines. Some of these

disciplines are eager to break out of the laboratory to examine messy problems with human cognition in complex work domains, and all welcome insights into the tough challenges inherent to fostering human performance in their designs and in their domains. This is tough, as welcoming new perspectives often results in challenges to comfortable states of knowledge, but it also broadens and strengthens our role and contribution.

Looking to future papers, I have proposed a broad mandate for *JCEDM* in my ramblings here—broader than one approach, one method, one purpose, or one focus area. We welcome papers that articulate how they, too, identify their own sweet spot, balancing ecological and task validity, generalizability, and insight into the human contribution within complex work environments, all in the pursuit of the important challenges we face in today's increasingly complex operations.

I look forward to receiving your *JCEDM* submissions at <http://mc.manuscriptcentral.com/jcedm>.

## INSIDE HFES

### **We're Counting on Your Vote!**

*By Valerie Rice, HFES Secretary-Treasurer-Elect*

It is election time again for the Human Factors and Ergonomics Society. In my role as secretary-treasurer, I've begun to hear anecdotes about the voting behaviors of HFES members. Although some of the information is positive, other reports leave me shaking my head in surprise. This short article is to alert you—HFES voting members—about some of the issues revealed to me and to ask you to make this year's election one of member involvement and interest.

*Issue #1:* Reportedly, members rarely vote at all if they do not know the candidates personally or if they do not recognize the candidates' names. It is great to vote for someone you know and whom you believe will do a good job. It is not so great to abstain from voting if you do not know the candidates. This year, if you don't know a candidate, please read his or her bio and vision statement at <http://www.hfes.org/web/aboutHFES/2011election.html> and vote for the person you think will make the greatest contribution. Our Society members are well educated and accustomed to discerning the intent of individuals based on their statements. We must do this every day during work, distinguishing who is actively engaged from those who are "just along for the ride." Please use those skills when examining candidate bios.

*Issue #2:* Not many of our eligible members vote in the elections. In other professional societies, elections can involve a year's worth of campaigning for votes, with candidates talking to their peers and publishing their action plans for addressing the concerns and future of their profession. Although elections in HFES are considerably more low key than that, they are no less important. The Executive Council and officers will make decisions about the HFES budget, establish (or re-establish) a strategic plan, and address HFES immediate questions and long-term goals. They will be representing HF/E internationally, to politicians, to the general public, and to other professions. They will be representing YOU.

Consider this: Would you be proud for them to walk into your office and represent you in a meeting? To your supervisor? To anyone of any importance to your career? This is essentially what they will be doing: acting as the face and action of the HF/E profession. Therefore, select your candidate thoughtfully and vote for the person(s) you think will best represent you.

I know that in every election, constituents (or members) are encouraged to vote. I know you have heard variations on this message before. Even so, I urge you, once again, to vote. Ballots were mailed to voting members on June 27 and are due on July 27.

This is your Society. Take hold of it. Make it your own. Let your voice be heard.

# Bylaws Revisions

*By Mica R. Endsley, President-Elect and Chair, Policy and Planning Committee*

In September, all voting members will receive a ballot by mail to vote on proposed revisions to the HFES Bylaws. The proposed changes, which have been unanimously approved by the HFES Executive Council, primarily allow for electronic voting in future HFES officer elections and other matters requiring a vote. The current Bylaws specify that ballots for nominations and elections for Society offices and actions such as Bylaws revisions be conducted by postal mail.

In the many years since the Bylaws were originally written, technology has changed a great deal. Online services now exist to support secure voting of this nature at a cost that is far less than we currently pay for printing and mailing ballots. We also believe it will be more convenient for our members and may increase voter turnout. (Members who are not able to access e-ballots will be provided with paper ballots by mail.)

In addition, voting members will note several other changes that are being proposed on the Bylaws revisions ballot. These are primarily to bring the language of the Bylaws up to date with current practices.

Voting members will have the opportunity to vote separately on each change or group of changes, or they may vote on the entire set of changes.

Please take the time to complete your ballot when it arrives and return it promptly to the HFES Central Office.

*Revisions are indicated as follows: Strikethroughs show text that is being deleted, and bold text shows additions.*

## HUMAN FACTORS AND ERGONOMICS SOCIETY

### BYLAWS

#### Article I – Membership

##### Section 1.

The corporate (voting) Membership shall consist of all Full Members of the Society. There shall also be nonvoting Associates, Affiliates, and Student Affiliate members, and any additional special classes of membership that are established by a three-fourths vote of the full Executive Council.

##### Section 2.

The Full Membership of the Society shall be composed of all Full Members in good standing at the time of adoption of these Bylaws and any others who are thereafter admitted to Full Membership.

##### Section 3. Qualifications for Membership

*Full Member.* Any person who has a bachelor's degree, **master's degree, or doctorate** from a regionally accredited institution and five full-time years of applicable experience in human factors work as defined by the Executive Council shall be eligible to become a Full Member of the Society. Appropriate academic degrees beyond the bachelor's degree may be substituted in part for work experience up to a total of four years. Interpretation of applicable academic degrees and work experience shall be made by the Membership ~~Admissions~~ **Committee Services Department**. For exceptional applicants, the **academic degree** re-

quirements ~~for a bachelor's degree~~ may be waived by a three-fourths majority vote of the full Executive Council.

*Associate:* Any person who has two years of full-time, relevant experience in the human factors/ergonomics field and is active in the human factors/ergonomics field shall be eligible to become an Associate of the Society.

*Affiliate:* Any person who is interested in the human factors **and ergonomics** field but who does not qualify for Full Member or Associate status, shall be eligible to become an Affiliate of the Society.

*Student Affiliate:* Any person who is enrolled as a full-time undergraduate or graduate student at an accredited college or university shall be eligible to become a Student Affiliate of the Society.

*Special:* Qualifications for any special class of membership, such as Fellow or Emeritus or Sustaining Member, shall be established by the Executive Council.

#### **Section 4. Application for Membership**

A candidate for membership in the Society shall submit, on an approved form, an application that specifies the candidate's qualifications.

Procedures for application to special classes of membership shall be established by the Executive Council.

#### **Section 5. Election to Membership**

Members of all classes shall be elected by majority vote of the full Executive Council.

#### **Section 6. Termination of Membership**

The affiliation of a person with the Society in any class of membership may be terminated at any time by resignation or by a two-thirds vote of the full Executive Council. Except for Emeritus Members, failure to pay dues for one year shall be considered resignation.

#### **Section 7. Privileges of Membership**

Full Members of the Society in good standing shall be entitled to vote, to hold office, and to participate in all activities of the Society. Associates, Affiliates, and Student Affiliates shall be entitled to participate in all activities of the Society, except that they may not vote or hold office. Student Affiliates and Sustaining Members shall receive a subscription to each regular publication of the Society. Special classes of membership shall be entitled to any privileges established by the Executive Council, except that the privileges of voting and holding office shall depend solely upon meeting the basic qualifications for Full Member of the Society.

#### **Section 8. Membership Dues**

Annual dues shall cover the fiscal year of the Society and shall be established by the Executive Council for each class of membership.

## Article II – Officers

### Section 1

The Officers of the Society shall be the President, President-Elect, Immediate Past President, Secretary-Treasurer, Secretary-Treasurer-Elect, Immediate Past Secretary-Treasurer, and six Members of the Executive Council.

### Section 2. Duties of Officers

The Officers of the Society shall perform the duties that are regularly or customarily attached to their offices under the laws of the State of California, and any other duties that are required of them by the Executive Council and these Bylaws.

The *Members of Executive Council* elected as such and other officers of the Society designated in this Article shall constitute the Executive Council, which shall govern the affairs of the Society.

The *President* shall be the chief executive officer and a member of the Executive Council. The President shall preside over all meetings of the Society and of the Executive Council; appoint or direct the appointment of all committee chairs not otherwise specified in these Bylaws, with the advice and consent of the Council; and supervise the Executive Director in the management of the nonfiscal business of the Society.

The *President-Elect* shall be a member of the Executive Council and shall chair the Policy and Planning Committee. The President-Elect shall act as an understudy to the president in preparation for assuming the duties of the presidency. The President-Elect shall assume the duties of President during the President's temporary absence.

The *Immediate Past President* shall be a member of Executive Council.

The *Secretary-Treasurer* shall be a member of the Executive Council and shall chair the Finance and Budget Committee. The Secretary-Treasurer shall supervise and oversee the Executive Director in the management of finances.

The *Secretary-Treasurer-Elect* shall be a member of the Executive Council. The Secretary-Treasurer-Elect shall act as the understudy to the Secretary-Treasurer in preparation for assuming the duties of office.

The *Immediate Past Secretary-Treasurer* shall be a member of the Executive Council.

### Section 3. Election of Officers

At least five months prior to the Annual Meeting of the Society, the Executive Director shall ~~mail send~~ a call for nominations for the offices to be filled to all voting Full Members of the Society. The nomination ballot shall provide, for each office, ~~spaces for three names to be listed~~ **an opportunity to nominate three individuals for each office.**

One month after the ~~call for~~ nominations ballots ~~are mailed is sent~~, the nominations shall be closed. The Executive Director, ~~with the assistance of at least one teller, and the Chair of the Nominations and Elections Committee~~ shall ~~count~~ **verify** the number of nominating votes for each nominee for each office **and determine the names of the candidates for each office to be presented to the membership.**

~~The Executive Director shall then deliver the nomination ballots to the Nominations and Elections Committee, which shall independently count the nominating votes and prepare the election ballot.~~ The ballot shall include, for president-elect and secretary-treasurer-elect the names of the three persons who received the greatest number of nominating votes and for the two at-large Executive Council positions the names of the six persons who received the greatest number of nominating votes and who are both eligible and willing to stand for the office, as determined by the Committee. If any nominee is found to be ineligible or unwilling to stand for the office, the name of the person who ranks next in the number of nominating votes, and who is eligible and willing to stand for office, shall be substituted. If two nominees are tied for the final position on the election ballot for any office, then

both nominees shall be included. If three or more nominees or tied, the tie shall be resolved by drawing lots. The names of the nominees for each office shall be listed in alphabetical order on the ballot.

One month after the election ballots are ~~mailed sent~~, the election shall be closed. The Executive Director, ~~with the assistance of at least one teller, shall count the votes cast for each candidate. And the Chair of the Nominations and Elections Committee shall certify the election results to the membership. The Executive Director shall then deliver the ballots to the Nominations and Elections Committee, or to at least two tellers designated by the Committee, who shall independently count the votes.~~ The candidate for each office who receives a plurality of votes shall be elected. A tie shall be resolved by drawing lots.

~~The Executive Director shall notify~~ All candidates shall be notified of the outcome of the election, ~~and t~~ The names of the Officers-Elect shall be ~~published in the next issue of the Bulletin~~ communicated to the membership within 30 days.

Upon petition by fifty Full Members in good standing, the Chair of the Nominations and Elections Committee shall arrange for an independent recount of the ballots.

The petition must be received by the Central Office within two months of the ~~publica-~~ **tion notification** of the election results ~~in the Bulletin.~~

#### Section 4. Terms of Office

The Officers-Elect shall assume office for the purpose of conducting business at the end of the scheduled business meeting of the incumbent Executive Council at the Society's Annual Meeting. The formal transfer of office shall take place at the Society's Annual Business Meeting. An officer shall hold office until a successor assumes the office, or until the Executive Council declares the office vacant as provided elsewhere in this Article. The term of office of the President-Elect shall be approximately one year, followed by approximately one year as President and then approximately one year as Immediate Past President.

The term of office of the Secretary-Treasurer-Elect shall be approximately one year, followed by approximately one year as Secretary-Treasurer and then approximately one year as Immediate Past Secretary-Treasurer.

The terms of office of the six Members of the Executive Council elected as such shall be approximately three years; the terms of two of these members shall expire at each Annual Meeting of the Society.

#### Section 5. Eligibility and Vacancies

To be ~~eligible for nomination to a candidate for~~ any office of the Society, an individual must be a Full Member in good standing and must be able to discharge the duties of that office, as determined by the Nominations and Elections Committee.

No individual may hold more than one elective office concurrently. However, an incumbent Immediate Past President, Immediate Past Secretary-Treasurer, or at-large Member of Executive Council in the final year of their three-year term is eligible to stand in nomination for another office. Any officer of the Society must be in the final year of the three-year term of office to be eligible to stand in nomination for reelection to the office currently held.

Any officer of the Society may resign from office by submitting a letter of resignation to the Executive Council. However, resigning shall not allow an officer to circumvent the eligibility requirements for election to a different office or reelection to the same office.

If any elected incumbent fails to perform the duties of office for any reason, the Executive Council may, by a two-thirds vote of the full Council, decree the office vacant. If the office of President or Secretary-Treasurer becomes vacant for any reason, the President-Elect or Secretary-Treasurer-Elect, respectively, shall assume the additional duties of the vacated office for the remainder of the term and then serve the regular term in that office.

If the office of President-Elect or Secretary-Treasurer-Elect becomes vacant for any reason, the Council shall appoint an incumbent officer to become President-Elect or Secretary-Treasurer-Elect. The appointed President-Elect or Secretary-Treasurer-Elect shall com-

plete the normal sequence of office as if elected by Membership vote. If necessary, the vacancy created by this appointment shall be filled in the next election.

If the office of Immediate Past-President, Immediate Past Secretary-Treasurer, or Council Member becomes vacant, the Council shall appoint an incumbent officer to assume the additional duties of the vacant office until the next election, when any vacancy that remains shall be filled. The term of any officer elected to fill a vacancy shall be equal to the remaining term of the vacant officer.

### **Section 6. Executive Committee**

An Executive Committee of the Council shall be formed of the President, President-Elect, Secretary-Treasurer, and at least one member of the Executive Council to be elected by a majority vote at the first meeting of the Council. The Executive Committee shall have authority to take those actions on behalf of Council specified by a two-thirds vote of each full Council.

### **Section 7. Society Position Statements**

Subject to prior approval by the Executive Council, the Society may take a position and express an opinion on human factors/ergonomics issues.

## **Article III – Committees**

### **Section 1.**

The selection of committee chairs, except as otherwise provided in the Bylaws, and the status and continuance of each committee shall be determined by the President with the advice and consent of the Executive Council. Committee chairs shall normally serve from the time of their appointment until the completion of the term of the President who appoints them.

## **Article IV – Affiliations**

### **Section 1.**

The Society may affiliate with other professional organizations to promote common purposes.

### **Section 2. Local Chapters**

The Executive Council may authorize the establishment of local Chapters, subject to any conditions adopted by the Council.

All Full Members of a local Chapter shall be Full Members of the Society. A Chapter may establish other classes of Chapter membership in accordance with Chapter Bylaws, and qualifications for these classes of membership must be approved by the Executive Council of the Society.

### **Section 3. Student Chapters**

Any Full Member of the Society who is directly affiliated with an academic institution of higher learning approved by the Executive Council may, upon written request, be authorized to form a student group to be known as “The (name of institution) Human Factors and Ergonomics Society Student Chapter.” Any student currently enrolled in good standing in the institution shall be eligible for membership.



#### **Section 4. Chapter Bylaws and Reports**

The Bylaws of all Chapters shall be compatible with the Articles of Incorporation and Bylaws of the Society, and must be approved by the Executive Council of the Society. Each Chapter shall keep records of all money received and paid out, and shall submit to the Central Office an annual financial report, a roster of current members, and a brief written report of its activities within one month of the end of the calendar year.

#### **Section 5. Technical Groups**

The Executive Council may authorize the establishment of Technical Groups subject to any conditions adopted by the Council. The Chair of a Technical Group shall be a Full Member of the Society.

The Council of Technical Groups shall assist in the formation, development, and operation of Technical Groups. The Council of Technical Groups shall be composed of a representative from each Technical Group, with a chair elected by the representatives.

### **Article V – Meetings**

#### **Section 1.**

The Annual Meeting of the Society shall be held at a time and place designated by the Executive Council. There shall be a business meeting of the Society during the Annual Meeting.

#### **Section 2.**

A special business meeting of the Society may be called at any time and place by the Executive Council, or shall be called by the Executive Director upon the written request of at least ten percent of the Full Members.

#### **Section 3.**

Announcements of all meetings of the Society shall be ~~made in the *Bulletin* or by mail~~ **communicated** to Full Members of the Society at least forty-five days prior to the meeting date.

#### **Section 4.**

The presence in person of fifty Full Members of the Society shall constitute a quorum at any business meeting of the Society.

#### **Section 5.**

During any business meeting of the Society at which a quorum exists, the Full Members may, by a majority vote, order the submission of any question, except one affecting the Bylaws of the Society, to the Executive Council or to all Full Members by mail ballot.

#### **Section 6.**

The Executive Council shall meet during the Annual Meeting of the Society and at the call of the President. The presence in person of a majority of the members of Executive Council shall constitute a quorum.

## Article VI – Amendments

### Section 1.

Motions to adopt, amend, or repeal the Bylaws must be consistent with the Articles of Incorporation and must bear the signatures of at least ten percent of the Full Members of the Society or be approved by a majority of the Executive Council. Such motions shall be submitted in writing to the Executive Director for ~~publication in the next issue of the *Bulletin*~~ **communication to the membership**. The Executive Director shall then submit the motions by mail ballot to all voting Full Members of the Society no sooner than sixty days and no later than ninety days after publication. The Full Members of the Society shall be allowed at least thirty days but not more than forty-five days to ~~return their ballots~~ **vote**. Approval by two-thirds of the Full Members who vote shall be required to adopt, amend, or repeal By-laws.

### Section 2.

The adoption, amendment, or repeal of a Bylaw shall take effect immediately upon its passage and shall be ~~published in the next issue of the *Bulletin*~~ **communicated to the membership**. The complete text of the current Bylaws shall be published annually ~~in the *Directory*~~.

## Article VII – Central Office and Executive Director

### Section 1. Central Office

The Central Office of the Society shall be located in the County of Los Angeles, State of California. The Central Office shall administer any Society business and perform any other services charged to it by the Executive Council.

The Central Office shall be managed by the Executive Director.

### Section 2. Executive Director

The Executive Director shall implement the policies and procedures established by the Executive Council under the direction of the President and the Secretary-Treasurer.

The Executive Director shall be appointed for a term not to exceed five years, may be reappointed, and may be removed from office at any time; each of these actions shall require a two-thirds vote of the full Executive Council. The Executive Director shall not hold any elective office in the Society.

The Executive Director shall appoint ~~office~~ personnel and acquire materials and equipment for ~~the Central Office Society~~, within budget limits.

The Executive Director shall manage the finances of the Society, subject to the approval of the Secretary-Treasurer. The Executive Director shall: administer all funds, and deposit or invest them as directed by the Secretary-Treasurer; collect all dues and authorized assessments; sign checks and drafts on behalf of the Society to disburse funds for authorized expenditures; keep records of all money received and paid out, and make these records available at reasonable times to any Full Member of the Society; prepare and submit annually to the Executive Council an audited financial report and a proposed budget for the next fiscal year for its approval; monitor expenses against established budgets; and notify the Council and the responsible persons when discrepancies occur.

The Executive Director shall manage the nonfiscal business of the Society, subject to the approval of the President. The Executive Director shall direct correspondence to the proper persons and handle all routine matters. The Executive Director shall have charge of

the seal and the corporate records, subject to call, and shall direct the publication of the minutes, records, reports, and proceedings authorized by these Bylaws and the Executive Council.

The Executive Director shall prepare and maintain an annual calendar of events and lead-time dates. The Executive Director shall: issue calls for meetings, nominations, and elections; develop and maintain consistency checks on past actions and policies of the Society; bring to the attention of the Executive Council any matters that may concern them; and help to plan new areas of activity for improving operations and increasing revenue.

The Executive Director shall be an ex-officio member of all Society committees and shall perform duties not specifically delegated to another Officer or Full Member of the Society, subject to the approval of the Executive Council.

The Executive Director shall be entitled to attend any meeting of the Executive Council but shall not vote.

### **Article VIII – Indemnification**

The Human Factors and Ergonomics Society shall indemnify and hold harmless each person who serves as an officer, staff member, committee chair, or technical group officer of the Society (collectively "agent") from and against any and all claims and liabilities, whether the same are settled or proceed to judgment, to which the agent becomes subject by reason of his or her position with the Society, or by reason of any action alleged to have been taken or omitted by the person in his or her capacity as agent, and shall reimburse each agent for all legal and other expenses (including the cost on settlement) reasonably incurred by him or her in connection with any such claim, liability, suit, action or proceeding, provided that the agent acted in good faith and in a manner that he or she reasonably believed to be in the best interests of the Society. No agent shall be indemnified against, or be reimbursed for, any claims, liabilities, costs, or expenses incurred in connection with any claim or liability or threat or prospect thereof, based upon or arising out of willful misconduct of that person's duties as officer, staff member, committee chair, or technical group chair. The final and conclusive determination of the propriety of indemnification and reimbursement hereunder and the reasonableness of such costs and expenses shall be made by the Executive Council acting at a meeting at which a quorum is unaffected by self-interest. The rights that accrue to any person under this provision shall not exclude any other right to which that person may be lawfully entitled.

## **New Plagiarism Policy Acknowledges Technology-Based Contributors and Interventions**

*By C. Melody Carswell, Chair, Publications Committee, and Kermit G. Davis, Division Leader, Scientific Communications and Publications Division*

Ethical guidelines related to scientific communication must keep pace with changes in the tools that authors and editors use to manage many parts of the writing and reviewing process. This was the premise that guided recent efforts by the HFES Publications Committee to develop an updated plagiarism policy for our journals.

The new policy, which was adopted at the midyear meeting of the Executive Council, was based on input from the editors of *Human Factors*, the *Journal of Cognitive Engineering and Decision Making*, *Ergonomics in Design*, and *Reviews of Human Factors and Ergonomics*. The policy was also modeled after policies from selected publishers and professional societies, such as Nature Publishing Group, the Association for Computing Machinery, and the Institute for Management Science.

The selection of a final plagiarism policy was based on requirements for clarity in basic definitions and flexibility in procedures to address potential cases in HFES publications. The

policy also deals with plagiarism from the work of others as well as self-plagiarism and copyright infringement.

The committee opted for an approach that focuses on plagiarism prevention through author education, as well as on prepublication interventions that allow authors to scan their own manuscripts. In a change from past plagiarism statements, the new policy strongly encourages all authors to make use of plagiarism-detection software prior to submission. The suggested use of such software is motivated by the committee's recognition of two important sources of unintentional plagiarism.

First, authors may appropriately cite a source that itself contains previously undetected plagiarism. Second, with publications generated by large, often multidisciplinary, research teams, it is increasingly difficult for a lead author to detect potential instances of plagiarism. There are Web sites that provide detailed descriptions and examples of different types of plagiarism. New authors (as well as some seasoned authors) should refer to sites such as <https://www.indiana.edu/~istd/examples.html> and other university sites that can be freely accessed.

The purpose of the plagiarism policy is to inform authors and provide the editors with flexibility to deal with potential plagiarism issues in HFES journals. The full text of the new plagiarism policy is now online at <http://www.hfes.org/Web/PubPages/HFpolicies.html>. Special acknowledgment is given to Publications Committee member Douglas H. Harris, who drafted the initial version of the policy.

## July Webinar: Current Trends in Situation Awareness Research and Application



Register today at <https://www2.gotomeeting.com/register/649415259> for the July 27 webinar, which takes place at 9:00–10:30 a.m. Pacific, 10:00–11:30 a.m. Mountain, 11:00 a.m.–12:30 p.m. Central, 12:00 noon–1:30 p.m. Eastern, 5:00–6:30 p.m. GMT.

Given the importance of situation awareness (SA) in supporting decision making in a wide variety of domains, and the significant challenge it poses, finding new ways of improving SA has become one of the major design drivers for the development of new systems. In addition, many organizations have become interested in how to improve operators' SA through training programs.

In this presentation, HFES President-Elect Mica R. Endsley will discuss the current state of research on situation awareness and its application to the design of systems for enhancing this important construct in both individuals and in teams. The presentation will include a discussion of progress on research in many domains as well as recent work on SA measurement, SA modeling, SA training, and SA design.

### About the Presenter

Mica R. Endsley, PhD, is president of SA Technologies, a cognitive engineering firm specializing in the analysis, design, measurement, and training of situation awareness in advanced systems, including the next generation of systems for aviation, air traffic control, medicine, energy, military operations, and cyber operations. She has authored more than 200 scientific articles on situation awareness, decision making, and automation. Endsley is coauthor of *Analysis and Measurement of Situation Awareness* and *Designing for Situation Awareness*. She is president-elect of the Human Factors and Ergonomics Society.

### Registration

**HFES Members:** This webinar is free! Registration for this webinar is available at <https://www2.gotomeeting.com/register/649415259>.

Feel free to pass this along to nonmembers, who may register for \$125. Nonmember registration is available at <http://www.hfes.org/web/EventDetails.aspx?EventID=9>.

## Online Consultants Directory

If you're a Full Member or Fellow and provide consulting or expert witness services, HFES invites you to purchase a listing in the online Consultants Directory (<http://www.hfes.org/web/ConsultDirectory/Consultdirectory.aspx>).

The Consultants Directory is freely available to visitors to the HFES Web site. The fees for an annual listing are \$150 for individuals and \$250 for companies; renewal rates for those already in the system are \$100 for individuals and \$200 for companies.

If you are a current HFES member and would like to place or renew a listing, go to [hfes.org](http://www.hfes.org), log in, and select the option "Create a Consultant Directory listing" on the Welcome page. If you have any questions, please contact the Member Services Department at 310/394-1811, [membership@hfes.org](mailto:membership@hfes.org).

## Erratum: 2011–2012 Directory & Yearbook

On page 47 of the printed *2011-2012 Directory & Yearbook*, next year's Annual Meeting dates in Boston should be October 22–26, 2012.

### ANNUAL MEETING

## HFES 2011 Registration and Program Now Available



Registration for the 55th Annual Meeting in Las Vegas is now open at <http://www.hfes.org/Web/HFESMeetings/2011registration.html>.

There you will find details about accommodations, social events, technical tours, and workshops. Online registration is available at <http://tinyurl.com/3drb8hz>. You can also download a printable form at <http://tinyurl.com/3o7rw9r>. Printed forms must be received by **September 9**.

To take advantage of early-registration discounts of up to \$100, you must register by **August 8** (not applicable for workshop-only or student registrations). All registrations, except for those attending only Monday workshops, include admission to the technical sessions and the Gala Opening Reception. Workshops and tours require payment of a separate fee.

### Online Preliminary Program

The online preliminary program may be viewed at <http://tinyurl.com/3jzb329>. Browse without logging in using keywords in titles and abstracts, author names, date/time, and technical group. To compose a personalized itinerary, create a login ID or use the ID you used to upload your proceedings paper. Search results can be exported. Note that changes may occur in the program, so be sure to check back often.

## The Annual Meeting Keynote Speaker: When in Vegas...

*By Anthony D. Andre, President and Vice Chair, 2011 Annual Meeting Host Committee*

This being our first Annual Meeting in Las Vegas, we have scheduled a rather Vegas-like keynote speaker for our opening plenary session. This year's speaker . . .err, performer . . . will be world-famous magician and illusionist Jeff McBride. McBride's innovative theat-



rical style, which includes a mix of many classic performing disciplines, combined with his amazing sleight of hand, results in a dramatic and moving performance.

Another reason for selecting an illusionist for our plenary session is that the theory behind illusions—and the tools of the illusionist—are similar to those that are relevant to the human factors/ergonomics community. Principles of attention, perception, biases, expectations, and memory are as pertinent to a magician as they are to an interface or systems designer. To underscore this overlap, following McBride's performance, I will conduct a brief on-stage interview focusing on the cognitive-perceptual principles behind illusions and audience manipulation.

I hope you plan to attend this year's Annual Meeting and the exciting plenary session that we have put together to kick off a fantastic week of science, practice, and networking. Don't miss it!

To learn more about Jeff McBride, please visit [www.mcbridemagic.com](http://www.mcbridemagic.com).

## **2011 Past President's Forum—Human Factors in NextGen Operations: Progress and Perspectives**

*By Kathleen L. Mosier, Immediate Past President*

The 2011 Past President's Forum, to be presented on Tuesday, September 20, from 10:30 a.m. to 12:00 noon, will focus on NextGen operations. The Next Generation Air Transportation System (NextGen) will entail significant changes in the roles and responsibilities of participants, increasingly sophisticated automation, and requirements for precise flight to enable safe and efficient operations. Human factors/ergonomics research and development related to all aspects of human-system integration (HSI) comprise key components for the success of this initiative. An HSI Roadmap based on operational improvements and requirements for NextGen was developed to facilitate research and workforce support activities and capabilities.

This year's Past President's Forum offers the opportunity to discuss with NextGen experts the most important HSI issues and progress made on the HSI Roadmap. Additionally, representatives from the principal stakeholder groups will offer their perspectives on the complexities and challenges for NextGen operations.

Panel members will be

- Kathleen L. Mosier, HFES Immediate Past President; San Francisco State University
- Thomas M. McCloy, FAA, Scientific and Technical Advisor for Human Factors, Human Factors Research and Engineering, ATO-P
- Dino Piccione, FAA, Human Factors Research and Engineering Group, Air Traffic Organization—Operations Planning, AJP-61
- Alan R. Jacobsen, Technical Fellow, Flight Deck Engineering/Human Systems Integration, Boeing Commercial Airplanes
- William W. Edmunds, Senior Human Performance Specialist, Air Line Pilots Association, International
- Melvin S. Davis, National NextGen Representative, National Air Traffic Controllers Association (NATCA)

I look forward to seeing you in Las Vegas.

## **Frisina to Present Arnold M. Small Lecture in Safety**

*By Michael J. Kalsher, Guest Lectures Chair, Technical Program Committee*



The 24th Annual Arnold M. Small Lecture in Safety will be presented by Michael E. Frisina on Wednesday, September 21, from 1:30 to 3:00 p.m. In his lecture, “**Managing Health Care Complexity—Reducing Medical Errors Through Leadership Behavior Strategies,**” Frisina will discuss the issues that affect the safety of patients as they move through the continuum of care in a health-care system. He will argue that individual leader behavior is the single most important predictor of organizational performance. The effectiveness of behavioral skills, as a human factor, among members of the health-care team determines the effectiveness and safety of their technical skills.

Frisina is the senior research scholar at The Center for Influential Leadership and founder of The Frisina Group, a consortium of leadership and development researchers, educators, and program developers. He serves as a leadership adviser to the South Carolina Hospital Association and the Carolina Center for Medical Excellence. A certified expert in continuous quality improvement methodologies, he is featured in the prestigious *Doing the Right Things Right* publication of demonstrated best-practice hospitals published by the Joint Commission. He also serves as a faculty member of Health Forum, an American Hospital Association company; is a featured writer for *Hospitals and Health Networks* magazine; and is author of *Influential Leadership—Change Yourself, Change Your Organization, Change Health Care*.

Frisina has been teaching and conducting research in leadership with direct application to health-care safety for more than two decades. He received the South Carolina Area Health Educator of the Year Award in 2007. He served as a faculty member and subject-matter expert in leadership and ethics at the United States Military Academy at West Point, New York; the Uniformed Services University of Health Sciences and School of Medicine, Bethesda, Maryland; the United States Army Academy of Health Sciences, San Antonio, Texas; and Tuomey Health Care System, South Carolina.

## **Special Events at the 2011 Annual Meeting**

In addition to a diverse range of sessions and workshops, the 55th Annual Meeting features some new and continuing opportunities for networking and education.

### **Macroergonomics Past, Present, and Future: A Tribute to the Late Hal Hendrick and to the Field of Macroergonomics**

This panel, chaired by Petra Alfred and Valerie Rice, will be presented on Wednesday, September 21, from 10:30 a.m. to 12:00 noon by the foremost authorities in the field of macroergonomics. During the presentations and discussion, panelists Brian Kleiner, Andrew S. Imada, Pascale Carayon, and Michelle Robertson may choose to share their fond memories of Hal while focusing on the field of macroergonomics—as Hal, the father of the discipline, would have wanted. Panelists will review the history of the development of the specialty, describe the inherent concepts, discuss the current state of the art, and project areas of future application and research. The diverse application areas will include methodologies for examining optimal work systems, participatory ergonomics, and community and health systems, and for solving specific work-related issues. A question-and-answer session will be held at the conclusion of the panel, as well as an opportunity for those involved in the field to share their unique experiences and insights.

## **2nd Annual National Ergonomics Month Expo**

The 2nd Annual NEM Expo will be held on Monday, September 19. The NEM Expo consists of organizations and individuals putting together interactive booths where attendees can participate in and learn about past outreach activities. All are welcome to reserve a booth or poster board for presenting outreach ideas and activities. To stimulate interactive dialogue, no idea is too great or small—reserve space today by contacting NEM Committee Chair Raegan Hoeft at [raegan.m.hoeft@lmco.com](mailto:raegan.m.hoeft@lmco.com).

## **HFES Scavenger Hunt**

The inaugural HFES Scavenger Hunt will be held during the first part of the Annual Meeting. The event provides a new social and networking opportunity, and all attendees are welcome to enter. Teams of four attendees will be formed to search for items around the Red Rock Hotel. Entry forms will be available at <http://www.hfes.org/Web/HFESMeetings/2011/annualmeeting.html> until September 19. The Host Committee has acquired an impressive list of prizes, so don't miss this exciting new event.

## **Future Leaders and Volunteers Reception**

On Tuesday, September 20, from 6:00 to 7:30 p.m., several prominent members in HFES will talk about how they became involved and describe the rewards of volunteering. There will be opportunities to network with HFES leaders and committee chairs, and for attendees to sign up to volunteer. The HFES Business Meeting precedes the Future Leaders reception.

## **Early-Career Professionals Reception**

This first-time event, on Wednesday, September 21, from 5:30 to 7:00 p.m., will enable young professionals from both industry and academia to network with one another and with prominent HFES members. A short program will target specific topics of concern to early-career professionals.

## **Pioneers of HFES Session and Reception**

Hosted by the Cognitive Engineering and Decision Making Technical Group, "Pioneers in Human-Automation Interaction Research" will recognize the seminal contributions of Peter A. Hancock, Richard J. Jagacinski, Raja Parasuraman, Christopher D. Wickens, and Glenn F. Wilson. The session will take place on Wednesday, September 21, from 1:30 to 3:00 p.m., followed by a reception from 3:00 to 4:00 p.m. and the CEDM-TG business meeting.

## **MEETINGS IN CONJUNCTION WITH HFES 2011**

### **Human Performance in Extreme Environments**

The Society for Human Performance in Extreme Environments (HPEE) will hold its 9th Annual Meeting on Sunday and Monday, September 18 and 19, 2011, in conjunction with the HFES 55th Annual Meeting. The HPEE meeting will feature presentations on topics such as spaceflight, military operations, underwater and high-altitude activities, extreme sports, and other environments that humans are not naturally suited to endure.

Meeting proceedings will be available. Register online at <http://www.hpee.org>. HFES members are entitled to a discounted rate.

### **VIMS2011**

Registration for the 55th Annual Meeting includes participation in the 3rd International Symposium on Visual Image Safety (VIMS2011), to be held September 22–23 at the Red Rock Hotel. An overview of VIMS2011 may be found at <http://www.vims2011.org/overview.htm>.



# Plan to Attend 2011 Student Career and Professional Development Day!

*By Sandra K. Garrett, Student Affairs Committee Chair*

You won't want to miss this year's Student Career and Professional Development Day on Monday, September 19, at the 55th Annual Meeting, so mark your calendars and plan to attend.

Monday will be packed with helpful information targeted at today's students and tomorrow's HF/E professionals. The Student Career Day sessions will provide an opportunity for students to focus on career preparation and transition and to learn from those who have already been there. Panelists will represent both recent graduates and highly successful professionals; session topics will cover networking skills, interviewing tips, and how to transition into the workforce.

The professional social network of today is one that requires a vast array of skills and interaction abilities. The first panel, hosted by the University of Idaho Student Chapter,—“**From Facebook to LinkedIn: Proper Etiquette and Networking Skills Needed for Rising Professionals in the Virtual Era**”—will address how students can take advantage of online networks to communicate worldwide with people in their desired professions. Through the integration of professional skills in the booming virtual market, students can avail themselves of the invaluable benefit of networking. This benefit may go hand in hand with success as the future of many professions becomes more technologically based and integrated. Determining and harnessing this set of skills requires experience, and through that experience, progress and success can be achieved.

Continuing with the career-development theme, the next panel is “**Interviews: The Do's and Don'ts.**” This session was designed to provide students with knowledge regarding the interview process: what potential employers are looking for and how best to present yourself so you can stand out and become the number one candidate for the job. The panelists come from academia, industry, and a government agency, bringing a wide variety of viewpoints and advice for both first-time and experienced job seekers.

The afternoon session will focus on what to do after you secure employment. “**Critical First Year in Your Job: How to Impress Your Employer**” will help students relate to the following scenario: You've prepared a great résumé, had a great interview, received a great job offer, and are ready to start work. During your first year or so on the job, you will contribute to your organization, learn, observe, and be observed. The organization will make decisions about you, and you will make decisions about the organization. So what then? You may take on increasing responsibilities in both technical and leadership assignments. You will learn about the organization and learn new skills. Depending on your employer, your management team may even sketch out an entire career plan for you. If your managers design such a plan, they may or may not tell you about it. You will need to learn about the business, business processes, and the business environment, and you will acquire technical skills while demonstrating your technical superiority. Equally important, you will need to position yourself in the organization, utilizing your social, teamwork, leadership, and other associated skills. This session aims to help you discover the skills that you need to place yourself in the best possible position.

All sessions are designed to be interactive, so although each panelist will be sharing some guidance and words of wisdom from his or her experience, plenty of time will be set aside for audience questions and discussion. Our HF/E professionals have a range of experience—from under 3 months to 30 years—and will provide answers to help ensure your success on the job. So whether you have a few years until graduation, are currently in the job market, or are just starting a new career, you won't want to miss this day. Come prepared to participate, learn, and have fun!

### **Session 1: From Facebook to LinkedIn: Proper Etiquette and Networking Skills Needed for Rising Professionals in the Virtual Era**

*Chair:* Rowdy Hope, University of Idaho; *Cochair:* Joseph Vargas, University of Idaho

#### **Panelists:**

- Lauren Reinerman-Jones, Institute for Simulation and Training, University of Central Florida
- Ernesto Bustamante, University of Idaho
- Ronald G. Shapiro, independent consultant

### **Session 2: Interviews: The Do's and Don'ts**

*Chair:* Kim Vu, California State University, Long Beach, and Chair, Student Affairs Committee; *Cochair:* Sandra K. Garrett, Clemson University

#### **Panelists:**

- Frank C. Lacson, Human Factors Scientist, Pacific Science & Engineering Group
- Linsey M. Barker, Assistant Professor, Industrial and Manufacturing Systems Engineering (IMSE), University of Missouri
- Vernol Battiste, Senior Research Scientist, San Jose State University Foundation and NASA Ames Research Center
- Thomas Ferris, Assistant Professor, Industrial and Systems Engineering, Texas A&M University

### **Session 3: Critical First Year in Your Job: How to Impress Your Employer**

*Chair:* Ronald G. Shapiro, independent consultant; *Cochair:* Meghan Rogers, North Carolina State University

#### **Panelists:**

- Arathi Sethumadhavan, Medtronic, Inc.
- Scott A. Shappell, Professor, Department of Industrial Engineering, Clemson University
- Tim Nichols, User Research Lead, Microsoft Studios User Research
- Heather C. Lum, Penn State Erie, The Behrend College
- Ronald G. Shapiro, independent consultant

## **Students: Share a Room and Save!**

Student Volunteers Cochair Shannon Roberts has set up a student roommate-matching service. If you need to find a roommate, send Shannon an e-mail ([hfes.roommate@gmail.com](mailto:hfes.roommate@gmail.com)) with "HFES Roommate Matching" in the subject line. You will then receive an e-mail with a link to an online form requesting the following information:

- name
- gender
- e-mail address
- phone number
- university you are attending
- dates of attendance
- housing preference (conference hotel, least expensive hotel, etc.)
- maximum number of students per room

This information will be compiled in a master list, updated regularly, and available only to students interested in the roommate-matching service. Students are responsible for selecting and contacting those who match their preferences and for making their own lodging arrangements.

## EHF2012 Call for Papers

Ergonomics & Human Factors 2012 is an annual international conference and a forum for the discussion and exchange of ideas and information on the latest research, development, and applications in HF/E. The conference, sponsored by the Institute of Ergonomics and Human Factors (formerly the Ergonomics Society) will be held April 16–19, 2012, in Blackpool, UK.

More information about EHF2012 is available at <http://ehf2012.org.uk>. The deadline for paper submissions is **October 10, 2011**.

## AHFE 4th International Conference

The 4th International Conference on Applied Human Factors and Ergonomics 2012 will be held July 21–25, 2012, at the Hilton San Francisco Union Square Hotel in San Francisco, CA. The following conferences will be held jointly with AHFE:

- 2nd International Conference on Human Factors and Ergonomics in Healthcare
- 2nd International Conference on Cross-Cultural Decision Making
- 2nd International Conference on Applied Digital Human Modeling
- 1st International Conference on Human Side of Service Engineering
- 1st International Conference on Affective and Pleasurable Design
- 1st International Conference on Human Factors in Transportation

The five-day conference will start with tutorials on July 21–22. The Call for Participations is available at [http://www.ahfe2012.org/files/CFP\\_2012\\_26.pdf](http://www.ahfe2012.org/files/CFP_2012_26.pdf), and abstracts are due **November 15, 2011**.



## Bulletin



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