



INSIDE HFES

## Whirly-Girl

By Francis T. Durso, President

Discovering the identity of the woman among the 100 men who started the Human Factors Society (see “Finding Eve” in the December 2013 issue of the *Bulletin*) got me wondering about the first woman to be honored with Fellow status by the Society. Who was she? What did she do? Did it take a while to recognize her? Were women held to lower standards, or were they more likely to be truly impressive to be honored in this way?

Finding the first woman to be inducted as Fellow in our Society was a little easier than identifying the woman at the Tulsa conference. In the March 1958 membership list, there were about 300 members. Three were women. Only one appears on our Fellow list: Dora Jean Dougherty McKeown (Strother).

So who was Dora? Did she live up to Fellow status? OMG, did she! (The initialism is a blatant attempt to appeal to our younger members and show that I’m in the groove. So, what’s a groove and why is it good to be in one? Never mind.)

Dora was inducted into the first Fellows class in 1968 along with 23 men. Donald Broadbent was one of Dora’s classmates, as was John Karlin (of all-digit dialing fame) and Jerome Lederer (of black box fame; he did the safety check on *The Spirit of St. Louis*). Al Chapanis would be given the honor two years later.

Dora was the first woman to check out on the B-29. She trained World War II pilots on the aircraft. Dora went on to design helicopter cockpits for Bell Aviation. Early helicopters (whirlybirds) had cockpit controls more akin to airplane controls than to modern helicopter controls. Imagine powering an aircraft that could move in any of the three axes but using instruments from a fixed-wing aircraft. Dora also served as a test pilot for Bell. She held the rotorcraft world records for altitude and distance from 1961 to 1966. She was with Bell for 28 years.

Dora earned a PhD in aviation education from New York University and taught at the University of Illinois. She’s in the Military Aviation Hall of Fame.

Finding out about our early members is interesting; I always learn a lot. That was especially true exploring Dora’s career. According to an interview with Dora that I uncovered, the Civilian Pilot Training Program trained a small percentage of women to disguise the fact that ultimately the pilots would be used in combat one day.



*Dora Dougherty McKeown (1921–2013), first female Fellow of the Human Factors and Ergonomics Society.*

Dora was a Whirly-Girl (International Women Helicopter Pilots) and a WASP—Woman Airforce Service Pilot. Her status as a WASP leads to two remarkable stories.



*The B-29 Superfortress.*

First is how Dora came to be the first female Superfortress pilot. It turns out that male pilots were reluctant to fly the B-29 because of engine fires that were common on its predecessor, the B-17. Lt. Col. Paul Tibbets (who later piloted the *Enola Gay*) decided to put together a female pilot and female copilot team to fly the plane so that the men would see that it was safe. I suspect it must have been embarrassing for men of my father's generation to refuse to get in a plane that you just saw landed by two women.

The second story is that Dora testified in an effort to make WASP service count as active-duty service. Women aviators from the Second World War secured veteran status and benefits in 1977 in part because of our Whirly-Girl.

I'm saddened to report that we lost Dora this past November. She was 91.

## **Call for Applications for HFES Accreditation**

*By Barbara S. Chaparro, Chair, Accreditation Committee*

The HFES Accreditation Committee invites representatives of graduate programs in human factors/ergonomics to submit applications for HFES accreditation. Currently, 15 of the 76 [graduate programs listed on the Society's Web site](#) are accredited by HFES.

The criteria for successful accreditation involve the demonstration of a sufficient degree of education and training in human factors/ergonomics. Program representatives must provide details regarding the curriculum, opportunities for practical experience, and staffing. A prerequisite for consideration is that a program have at least six graduates. More details on the criteria and process are described in the [HFES Accreditation Self-Study Report Guide](#). The Accreditation Committee also will be conducting a webinar this spring to describe the process and provide an opportunity for asking questions.

### **Call for Reviewers**

The Accreditation Committee is seeking volunteers to serve as application reviewers. Reviewers should be familiar with the latest accreditation process and criteria. Please send questions regarding the accreditation program and/or application and review process to [barbara.chaparro@wichita.edu](mailto:barbara.chaparro@wichita.edu).

## **Executive Council Midyear Meeting**

The 2014 Midyear Meeting of the HFES Executive Council will be held March 20 and 21 at the Sheraton Chicago Hotel and Towers. For additional information, contact HFES Executive Director Lynn Strother at 310/394-1811.

## Update Your Member Record for the *Directory & Yearbook*

The *2014–2015 Directory & Yearbook* is an important tool for connecting you with fellow HFES members. **March 7** is the deadline for updating your member record to ensure that others can reach you.

To enter updates, simply log in at [hfes.org](http://hfes.org). After logging into your member record, select “View/change my membership information” and change your demographic details. If you have forgotten your login ID, please contact [Member Services](#) (310/394-1811).

HFES publishes only the business contact address for every member; if a business address is not available, the home address will appear unless you have requested that it not be published. (To omit your home address, please contact Member Services.)

The online directory, which is included with your membership, has the latest updates. If you would like to receive a printed directory as well, the cost is \$10. If you already renewed your membership and neglected to order a printed directory, you can place an order for it [here](#).

## Submit Your Research for the \$10,000 *Human Factors Prize*

The Human Factors and Ergonomics Society welcomes your submissions for the 2014 *Human Factors Prize for Excellence in Human Factors/Ergonomics Research*. The Prize confers a \$10,000 cash award and publication of the selected paper in the Society’s flagship journal, *Human Factors*. The recipient will also present the paper in a special award ceremony at the 2014 HFES Annual Meeting in Chicago.

The topic for the 2014 Prize is **human-automation interaction/autonomy**. We seek articles that describe HF/E research that pertains to effective and satisfying interaction between humans and automation.

Suitable sample topics include

- research on human trust in automation and how trust affects interactions
- how team interactions are affected by automation
- models of effective human-automation interaction/autonomy

Manuscripts should be submitted between **April 1 and June 2**. Membership in HFES is not required. Visit <http://www.hfes.org/web/pubpages/hfprize.html> for additional details about the topic, including online submission, a list of published papers on related topics, eligibility, evaluation criteria, and deadlines.

## Editor Sought for New HF/E Methods Series

HFES is seeking candidates for editor of a new book series to begin development in 2014. The Executive Council approved a proposal to publish at least two brief (100-page) how-to books each year on methods in human factors/ergonomics.

The aim of the series is to provide accessible, hands-on books detailing the background, rationale, procedures, and outcome analyses associated with methodologies involved in the investigation of human involvement in complex systems within the context of a detailed worked example. Drawing an analogy to the Sage “green book” series in quantitative methods would be appropriate.

Potential topics include, but are not limited to, methods in anthropometry, charting, cognitive modeling, economic analysis, error analysis, macroergonomics, meta-analyses, signal-

detection theory, simulation techniques, participatory design, prototyping, risk analysis, structured interviews, and workload measurement (subjective, objective, physiological).

The job of the series editor includes the following:

- form an editorial advisory board
- determine which topics to publish each year
- conduct market analysis for selected topics (with HFES communications director)
- formulate and implement a vetting process for reviewing proposals
- develop guidelines for writing books in the series
- work with authors to ensure compliance with the series template
- oversee review of submitted manuscripts
- monitor and evaluate progress and quality
- report to the Publications Division and Executive Council semiannually regarding status and future directions

The series editor will receive an annual honorarium.

To apply for the position, please send a letter of interest and current CV to Lois Smith ([lois@hfes.org](mailto:lois@hfes.org)).

## **Call for Papers: *JCEDM* Special Issue on Cybersecurity Decision Making**

The *Journal of Cognitive Engineering and Decision Making* welcomes submissions for a special issue on cybersecurity decision making. The security of computing systems and networks affects many aspects of life. Confidentiality, integrity, and availability of information systems impact people's personal lives, work environments, critical infrastructure, government services, and military operations. Because information systems are interconnected, security decisions made on a personal workstation or workplace system can have direct or cascading effects elsewhere. This special issue of *JCEDM* will focus on the role of human decision making in cybersecurity: decision processes, approaches to measuring decision outcomes, and methods for improving the effectiveness of cybersecurity decisions.

To date, work on cyber decision making has focused primarily on defensive technical staff, who monitor for abnormalities in computing systems and networks and decide how to prevent or respond to security incidents. Others who make cybersecurity decisions have not been studied to the same degree. For example, managers such as the chief information security officer make strategic decisions that consider security risks, policies, resource investments, and the impact of a security breach. Individual users, such as office workers, students, and soldiers, regularly make security decisions about password use, personal firewalls, and policy compliance. Although most such users don't realize the impact of their decisions, those decisions directly affect the security posture of the work environment and influence attackers' exploitation strategies.

### **Scope**

This special issue of *JCEDM* focuses on the state of the art, research results, and open research issues related to the human decision process in both defensive and offensive cybersecurity operations and by various types of decision makers (e.g., users, technical specialists, and security managers). Special emphasis is on studies, analyses, and research based on real-world observations rather than on decontextualized laboratory studies. Topics of interest include, but are not limited to,

- Cognitive task analyses, work analyses, and field research specific to cyber situation awareness and cybersecurity decision making
- Models of cybersecurity decision processes, both defensive and offensive
- Similarities and differences in decision making of users, technical cyber analysts, and security managers
- Data sources and metrics used by cybersecurity decision makers and the reliability and validity of those data sources and metrics
- Measures of effectiveness and impact of cybersecurity decisions
- Methods of collaborative decision making in cybersecurity operations
- Technologies and techniques to enhance the rapid acquisition of cybersecurity decision-making skills or the effectiveness of cybersecurity decisions
- How risk assessment is used in various cyber decision making
- The role of cyber economics in cybersecurity decision making
- The role of usability in cybersecurity decision making
- Empirical analyses of how system designs affect cybersecurity situation awareness and decisions.

Commensurate with the scope and vision of *JCEDM*, submissions should emphasize the human contribution to cybersecurity, whether by modeling human activity and cognition directly or by designing the technologies, infrastructure, operational procedures, or work practices that support human performance. Thus, submissions to this special issue should demonstrate a reasonable understanding of the relevant human factors literature. They may also identify where further fundamental human factors research is required in the laboratory to support and inform the messy complexities of real operations.

Coauthorship by cybersecurity practitioners is strongly encouraged to provide real-world grounding of the work. Papers related to areas of cybersecurity beyond network defense, and to the business decisions related to cybersecurity, are also encouraged.

### **Submission Guidelines**

Full articles must be [submitted online](#) by *June 1* and comply with the guidelines in the [Instructions for Authors](#). Prior to submitting a manuscript, authors are welcome to correspond directly with the guest editors (see below) or [Editor-in-Chief Amy Pritchett](#) to discuss the potential submission.

There is no fixed page requirement; authors should properly describe the attributes of the task and domain to illustrate important determinants of human behavior and to document system developments and results of experiments, observations, or evaluations. Nevertheless, submissions will also be evaluated for their succinctness and appropriate brevity. Publication of the special issue is expected in December 2014.

### **Questions?**

Please direct any email correspondence before submission to the guest editors, [Anita D'Amico](#) (631/759-3909) or [Emilie Roth](#).

## **Register Soon for the Health-Care Symposium**

With registration reaching record levels for the very successful Symposium on Human Factors and Ergonomics in Health Care, March 17–19, in Chicago, HFES encourages members to register and reserve accommodations as soon as possible. [Register online](#) through March 9; after that date, register on site.

The HFES block of rooms at the Sheraton Chicago Hotel and Towers is more than two-thirds sold out. The special symposium rate is available until February 23 or until the block sells out. [Book today!](#)

The full program may be viewed at [hfes.org](http://hfes.org) or browsed by key word, author, or track at the [itinerary site](#). Create a login to build your personal itinerary.

## STUDENT VIEWS

### **Transitioning Through Academia: Graduate, Postdoc, and Tenure-Track Faculty**

By *Tina Mirchi*

*This is the first of three articles summarizing Student Career and Professional Development Day at the 2013 Annual Meeting. The theme of the day was transitions. Panelists represented both recent graduates and successful professionals from universities, industry, and government agencies.*

Whether starting a postdoc or getting a tenure-track faculty position in human factors/ergonomics, a student may wonder what he or she needs to do to find the right path to access these opportunities. This article summarizes comments and advice from the panel, “Transitioning Through Academia,” at the 2013 Annual Meeting Student Career and Professional Development Day. This panel was chaired by Jim Miles (California State University, Long Beach) with the following panelists: Lisa Jo Elliott (University of South Florida), Kelly Neville (Embry-Riddle Aeronautical University), and Mary Ngo (Pacific Science & Engineering Group).

#### **Why Academia?**

Miles started by asking the panelists, “What got you interested in pursuing a career in academia?” After working in government and industry for 16 years, Neville felt that she was ready to transition to academia to help better prepare future professionals in the field. She believed that industry helped her understand what works and what does not work as a professional, and she wanted to teach students how they can avoid some of the mistakes she made in her career.

According to Ngo, academia will push you to continue to learn more, which is intellectually challenging and satisfying. She commented that her transition from a doctoral program at Oxford to academia as a postdoc came about through her love of teaching. As a postdoc, she worked closely with students on research and advised them about future academic careers. Elliott found her work at IBM and with the U.S. Department of Defense exciting, and it was rewarding to be involved with a team and able to influence the design process. However, she felt that the lack of opportunity to contribute to theories was both restricting and frustrating. Elliott believes that industry professionals are limited in how they can address problems, and she prefers the ability to write papers and carry out studies that build on theories in an academic setting. Students challenge academicians to continue growing in new ways, said Elliott, who thinks that a major benefit of pursuing a career in academia is teaching students and exercising the will to pursue ideas that are of interest to the academic rather than to the company.

#### **Day to Day in Academia**

A typical day in an academic career is spent preparing for a course, reading literature reviews, grading, and writing papers and proposals. Ngo commented that even as a postdoc, she spends a lot of time advising students, training them to run experiments and providing them with theoretical knowledge. All panelists noted that in order to increase the production of research, one must have management skills to train students to work on their projects.

## **How to Stand Out When Searching for a Job in Academia**

The panelists explained that the interview process begins long before the application process. Because HF/E is a small highly networked field, members of academic hiring committees usually know people with professional relationships with a student. In addition, the panelists who had served on hiring committees commented that a candidate's research potential at the university and his or her potential for gaining tenure are seriously considered. The applicant's fit with the organization is also critical. Panelists advised students to determine the scope of the department's current research and then see how their own interests relate.

Hiring committees may also look for collaboration and teamwork skills, qualities that are demonstrated in letters of recommendation. Having good writing skills and being creative are critical and can be ascertained from the application. Teaching is another necessary skill for students pursuing academic careers. The panelists suggested that if students feel uncomfortable teaching or they lack skills in that area, they should consider taking classes within the institution's teaching academy or attending teaching conferences.

## **What About Publications?**

If students are thinking of beginning a career in industry but possibly returning to academia later, they should consider the amount of research that would be needed to make them competitive for the type of academic position being pursued. Another way students could make themselves marketable for an academic position is to be listed as first author on publications. Miles indicated that the quality of the published work, level of authorship, and prestige of the journals in which the research is published are more reflective of a student's potential than is the number of publications. Members of the audience who had served on academic hiring committees also noted that having multiple publications or a program of research in a specific area, with a clear direction for future studies, will also stand out to faculty selection committees.

## **Academic Career Promotion and Tenure Guidelines**

Students need to investigate the promotion and tenure guidelines at the institutions to which they apply. Guidelines differ between universities and departments; some require that assistant professors bring in a certain amount of funding, and others may stipulate that a certain number of students would need to be mentored. Elliot noted that promotion and tenure guidelines can be found online for public universities, or students can request them from the department.

## **Best Advice for Students Transitioning to Academia**

The panelists offered the following tips.

1. Be prepared to be independent. Professors have the freedom to decide which experiments to run and how to design them. Although professors may be influenced to take on certain projects based on their funding sources, they do have some control over the direction of the research.
2. Be comfortable being the expert. Neville advised, "be confident and believe in yourself." There will always be someone discouraging you from an idea, but be determined to keep pushing.
3. Make the best use of your time. Ngo noted that professionals need to know when something is good enough; reiterations of a paper may not be beneficial when the time could be spent on something more fruitful.

4. Do not underestimate the amount of work that goes into preparing a class. The panelists agreed that, typically, one new class can take up to two months of 40-hour weeks to prepare.

### **Job Prospects in Academia**

Miles ended the panel by asking how the panelists felt about the state of the current job market for academic careers, both from their own experience and from that of their recent students. Neville commented that job placement for students at her university has not been a problem. With regard to salaries, academic jobs tend to pay less than do industry jobs. The drawbacks for industry, however (such as limited control over choice of research projects), can affect quality of life. In addition, the panelists noted that the academic salary is typically for only nine months of the year. As such, they indicated that there are opportunities to augment the academic salary with grants or summer teaching.

In conclusion, the panel provided a wide variety of tips for those considering an academic career. Students are encouraged to take advantage of opportunities to gain experience and help aid the transition to academia.

*Tina Mirchi is a first-year master's student in human factors psychology at California State University, Long Beach.*

## **ANNUAL MEETING**

### **Submit Your HFES 2014 Annual Meeting Proposals by March 3**



The online [Call for Proposals](#) for the 2014 HFES International Annual Meeting is open. The deadline for submitting any type of proposal is **March 3**. Case studies, debates, demonstrations, competitive product designs, 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.

Only papers that have not been published previously or presented at another professional meeting may be submitted. All research and analyses described in a proposal must be complete at the time of submission. 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. Before submitting your work, please read the [Call for Proposals](#) thoroughly.

Note that for all accepted submissions, one of the authors 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](#) at 310/394-1811.

## Congress Approves Omnibus Appropriations Bill

By Lewis-Burke Associates LLC

On January 13, the House and Senate Appropriations Committees released an omnibus appropriations bill for fiscal year (FY) 2014. Both the House and Senate passed the bill, on January 15 and January 16, respectively. The omnibus bill will provide a needed boost for federal research, education, and health-care programs important to universities and nonprofit research institutions. Somewhat surprisingly, the omnibus includes all 12 of the annual spending bills.

The more controversial appropriations bills—including Labor, Health and Human Services, Education, and Interior and Environment—were expected to require continuing resolutions (CRs) to fund programs at current levels for the remainder of FY 2014, particularly after a stalemate over issues such as funding for the health-care reform law caused a halt in appropriations negotiations and a shutdown of the federal government in October 2013. Reaching agreement on all 12 bills is a victory for appropriators who have seen their influence decline in recent years as gridlock on major funding issues, coupled with increased partisanship, made CRs commonplace.

As drafted, the sprawling omnibus bill adheres to the \$1.012 trillion topline spending level established by the Ryan-Murray budget agreement approved by Congress last month. House Appropriations Committee Chairman Hal Rogers (R-KY) and Senate Appropriations Chairwoman Barbara Mikulski (D-MD) were able to negotiate a package that contains concessions for both parties and is free of many of the divisive policy riders that threatened to derail progress. Because the House and Senate approved the bill, the omnibus will avert the threat of another government shutdown and represents a reassertion of congressional power to set spending priorities across the federal government.

With some relief from sequestration for two years and support for new initiatives in the omnibus, many federal research agencies and programs fare well in the agreement. The Department of Energy Office of Science, National Science Foundation, National Institutes of Health, and science and technology programs at the Department of Defense are among those slated to receive increases above FY 2013 levels (post-sequestration). As evidenced by the omnibus, research and development—and particularly basic research—remains a bipartisan priority for members of Congress despite constrained total spending levels. Guidance for each agency is included in the explanatory statement that accompanies the omnibus bill. Of interest to HFES, the Army included the language on [user interfaces to improve warfighter performance](#) as follows:

The Army is performing research and conducting exercises aimed at closing the gap between the difficulty in operating traditional military equipment and the ease of operating modern handheld devices. The Secretary of the Army is encouraged to accelerate these ongoing technology development efforts and update equipment user interfaces to improve warfighter performance.

The full Lewis-Burke analysis of the FY 2014 omnibus bill is available [here](#).

### Issues Related to Federal Agency Travel Spending

On Tuesday, January 14, the Senate Homeland Security and Governmental Affairs Committee held a hearing entitled “Examining Conference and Travel Spending Across the Federal Government.” At the hearing, Senator Coburn (R-OK) and a few others expressed a desire to pass legislation that would codify the current Office of Management and Budget (OMB) guidance. The OMB guidance was issued in a [memorandum](#) to the heads of executive departments

and agencies in May 2012 as part of an effort to promote efficient spending across the federal government. The memo stated that each agency must reduce their travel expenses for FY 2013 by 30 percent under FY 2010 levels and maintain this reduction each year through FY 2016. Some senators seemed worried that agencies will become less diligent in oversight as more time passes, as media attention decreases on the issue, and as the administration changes. The OMB witness, Beth Cobert, was reluctant to endorse the idea of legislation, highlighting the importance of flexibility given changing technology and other factors. Senator Carper (D-DE) and Cobert did note the value of face-to-face interaction to accomplish agencies' missions, and they highlighted scientific societies' annual meetings as an example. HFES will be submitting testimony on this issue to be included in the congressional record.

In addition to the hearing, the FY 2014 omnibus included some new policies related to federal agency officials' travel to conferences. These new policies are in addition to existing Obama Administration policies that limit travel to conferences but should not affect HFES conference attendance. The two policies included in the omnibus would require agency-hosted conferences to explain the costs and contracting procedures for events that cost more than \$100,000. The second policy restricts travel to a single conference outside the United States to no more than 50 federal employees from a federal agency, unless it is law-enforcement related.

Although there has been a lot of momentum from scientific societies recommending that scientific conferences should be exempted from these restrictions, the Obama Administration likely sees those current restrictions as both a way to save money in a time of tight budgets and also avoid any potential further scandal. Lewis-Burke will continue to lobby Congress on this important issue.

### **National Research Council Releases Prepublication Report on Common Rule**

On January 14, the National Research Council (NRC) committee released a prepublication of the [report](#) "Proposed Revisions to the Common Rule for the Protection of Human Subjects in the Behavioral and Social Science." The final publication is expected to be released in March. The report examines the prospective revisions to the [Common Rule \(45 CFR 46\)](#) to inform the Department of Health and Human Services' current efforts to reassess the federal policy and to update the federal rule (last revised in 1991) for the protection of human research participants relevant to the behavioral and social sciences.

The study was to be conducted in two phases. This report is Phase II and is a result of Phase I, a public workshop held March 2013 to inform the efforts of the federal government in revising the regulations that govern the protection of human participants in research. The Department of Health and Human Services (HHS) put forth several proposals in its July 2011 Advance Notice of Proposed Rulemaking ([ANPRM](#)).

The NRC committee recommends revising the Common Rule in other ways and amending specific proposals in the ANPRM to more effectively respond to the current research and methods, and to clarify the definition of "human subjects research" and "minimal risk." The NRC report addresses the current research landscape to provide guidance for Institutional Review Boards (IRB) in the context of upholding the ethics of human subjects research and maintaining the effectiveness and processes of social and behavioral science research. Since the last update of the Common Rule, technology has drastically advanced, as has the volume of data on human participants; thus, the report provides best practices for IRBs to implement new human research protections and assess the effectiveness of the rule.

On Thursday, January 30, an open public forum was held at which the committee presented the recommendations of the report and discussed it with an audience of representatives of federal agencies, research institutions, and professional and advocacy associations, as well as other stakeholders. Lewis-Burke attended this meeting on behalf of HFES.

More information about the NRC study is available [here](#).

## Usability of Electronic Health Records

On January 15, the Office of the National Coordinator for Health Information Technology (ONC) released Safety Assurance Factors for EHR Resilience (SAFER) guides to help practitioners use health information technology more safely. The [SAFER guides](#) are an important component of DHHS' July 2013 Health IT Patient Safety Action and Surveillance Plan. The guides have been developed by health IT safety and informatics researchers and cover the following areas: High Priority Practices, Organizational Responsibilities, Patient Identification, Computerized Physician Order Entry (CPOE) with Decision Support, Test Results Review and Follow-Up, Clinician Communication, Contingency Planning, System Interfaces, and System Configuration.

Additionally, on January 6, Jacob Reider, MD, director of the Office of the Chief Medical Officer at ONC, published an [article](#) on the usability of electronic health records. In the article, Reider raised concerns that many usability challenges remain unresolved. Lewis-Burke has engaged with the National Institute of Standards and Technology on this topic, and we encourage HFES members to provide comments and to offer expertise. Any comments should be posted at the bottom of the online article.

## Recent Senate Hearings on Transportation Issues

*By Lewis-Burke Associates LLC*

On January 15, the Senate Commerce, Science, and Transportation Committee held a [hearing](#), "The Future of Unmanned Aviation in the U.S. Economy: Safety and Privacy Considerations." The hearing focused on the increased use of unmanned aerial systems (UAS), commonly known as drones, and challenges facing government and industry in facilitating UAS development. Witnesses included Michael Huerta, administrator of the Federal Aviation Administration (FAA); Missy Cummings, director of the Human and Autonomy Laboratory at Duke University; Henio Arcangeli, vice president of corporate planning and new business development at Yamaha Motor Corporation; and Chris Calabrese, legislative counsel at the American Civil Liberties Union (ACLU).

This hearing came weeks after the FAA announced six test sites across the United States for UAS research and testing, which marks a notable step in achieving the FAA's goal of safe integration of UAS into the national airspace. The hearing focused on the significant barriers—privacy, safety, and national security—toward reaching full integration. Both committee members and witnesses insisted that drones carry significant privacy risks despite many nonsecurity or surveillance uses such as farming. Chris Calabrese argued that Congress must set clear privacy rules that don't infringe on personal rights, arguing that many beneficial uses of drones—news reporting, mapping, agriculture—do not require the collection of personal information.

Missy Cummings noted that the United States lags behind Japan and Europe in drone technology development, and that strong industry buy-in and thoughtful adoption of manned aircraft safety standards for drones will be key to UAS' success. She also highlighted that shrinking federal research and development (R&D) budgets severely hinder America's ability to develop a workforce necessary for designing, developing, and operating UAS. These cuts mean fewer innovations and fewer graduates trained in human-machine integration, software, and hardware and fields key to unmanned systems. Administrator Huerta also targeted cybersecurity as a significant challenge to the industry and stated that the FAA is working with the Radio Technical Commission for Aeronautics, an organization that develops aviation standards, to establish effective cyber technology standards. Huerta said that the FAA R&D activities will focus on this issue going forward.

On January 14, the Homeland Security and Government Affairs Subcommittee on Financial and Contracting Oversight conducted a [hearing](#), “Management of Air Traffic Controller Training Contracts.” The purpose of the hearing was to conduct a review of the FAA’s contract for the Air Traffic Controller Optimum Training Solution (ATCOTS) program, which totals \$849 million. Those who testified before the subcommittee included Mary Kay Langan-Feirson, assistant inspector general of acquisition and procurement audits in the Office of the Inspector General, Department of Transportation (DOT); Patricia McNall, the FAA’s deputy assistant administrator of acquisitions and business services; and Lynn Dugle, president of intelligence, information, and services at the Raytheon Company.

Whereas the focus of the January 14 hearing was contract oversight and cost overruns, Chairwoman McCaskill (D-MS) and Ranking Member Ron Johnson (R-WI) highlighted the importance of streamlined training programs and efficient systems for hiring, initial training, and ongoing training of air traffic controllers. In order to effectively compete for future training contracts, Senators McCaskill and Johnson emphasized a strong understanding of the types of training that are needed and associated costs. Also, Senator McCaskill challenged McNall and the FAA to reevaluate the right balance between in-sourcing and contracting air traffic controller training.

*Lewis-Burke Associates LLC, a leading Washington, D.C.–based government relations and consulting firm, represents the public policy interests of scientific societies and institutions of higher education. Lewis-Burke’s staff of about 20 government relations professionals work to promote the federal research and policy goals of HFES and the HF/E community.*

## OTHER NEWS

### 2013 FPE Student Practitioner Award Winners

Congratulations to Kapil Chalil Madathil, winner of the 2013 Dieter W. Jahns Student Practitioner Award from the Foundation for Professional Ergonomics (FPE), a nonprofit dedicated to advancing professionalism in ergonomics. Madathil, a student at Clemson University, is the fourth recipient of the award, which was created in honor of Dieter Jahns, a lifelong advocate of the practice of ergonomics and a leader in ergonomics certification. The award was presented to Madathil by Dieter’s wife, Karel, at the 2013 HFES Annual Meeting in San Diego. The award included a \$500 check.



*Karel Jahns presenting award to Kapil Chalil Madathil. Joel S. Greenstein, Madathil’s professor, is also present.*

In Madathil’s winning project, “Design and Development of a State-Wide Research Permissions Management System,” he developed the Research Permissions Management System (RPMS) to electronically capture and manage research permissions, consents, and Health Insurance Portability and Accountability Act (HIPAA) privacy authorizations for research. RPMS development followed a user-centered design approach involving user research, needs identification and analysis, specification and concept development, and the development of a detailed design followed by iterative testing and refinement. This system is open source and can be accessed at <https://github.com/HSSC/RPMS>.

development of a detailed design followed by iterative testing and refinement. This system is open source and can be accessed at <https://github.com/HSSC/RPMS>.

Madathil, a PhD student in industrial engineering, stated, “Thank you for this award. I am truly honored and humbled. I would like to express my sincere appreciation to the Board of Directors of the Foundation for Professional Ergonomics and to the family of Dieter W. Jahns for instituting this award. This is indeed a great way to motivate students in human factors and ergonomics.”

A Certificate of Appreciation was presented to runner-up Jie (Victor) Zhou, West Virginia University, for his project, “Trunk Kinematics Under Sudden Loading Impact When Adopting Different Foot Postures.” Zhou said, “Being the runner-up for the student practitioner award is definitely encouraging. I am very appreciative of this.”



*Karel Jahns presenting Certificate of Appreciation to Jie Zhou.*

## **Foundation for Professional Ergonomics 2014 Student Award Deadline Set**

The Foundation for Professional Ergonomics (FPE), a nonprofit organization dedicated to advancing professionalism in ergonomics, has announced the 2014 deadline for the Dieter W. Jahns Student Practitioner Award. The award was created in honor of Dieter Jahns, a lifelong advocate of the practice of ergonomics and a leader in ergonomics certification. The submission deadline for the 2014 award is **May 31**. Notification will be sent by July 31.

The annual award is given to the student (or group of students) for a project that demonstrates the major practice areas of ergonomics: analysis, design, and evaluation. The purpose of the award is to advance professionalism in ergonomics by recognizing educational activities that demonstrate how professional ergonomists serve to make people’s lives at work and at home healthier, safer, more productive, and more satisfying. The award is open to master’s and doctoral students in ergonomics and ergonomics-related programs. Students who have completed their graduate degrees within one year of submitting are also eligible.

The award and cash prize of \$500 will be presented during the HFES Annual Meeting, October 27–31, 2014, in Chicago, Illinois.

As this is a practitioner award, the student (or students) should describe and document a research or intervention project that exhibits the following:

- The major practice areas of ergonomics: analysis, design, and evaluation
- Direct, practical application
- Final design recommendations or a description of how the resulting information can be applied to design.

Submissions can be made individually or as a group. They should provide adequate descriptions, illustrations or photos, and details that address the judging criteria. Entries will be judged by the FPE Board of Directors. Please go to [www.ergofoundation.org](http://www.ergofoundation.org) for complete details on criteria and format.

## CALENDAR

### June

[Society for Information Display \(SID\) Display Week 2014 International Symposium, Seminar and Exhibition](#), June 1–6, 2014, San Diego, CA.

[Public Risk Management Association \(PRIMA\) 2014 Annual Conference](#), June 8–11, 2014, Long Beach, CA.

[American Society of Safety Engineers \(ASSE\) Professional Development Conference & Exposition](#), June 8–11, 2014, Orlando, FL.

[Conference on Lasers and Electro-Optics \(CLEO\) 2014](#), June 8–13, 2014, San Jose, CA.

[European Conference on Information Systems \(ECIS\) 2014](#), June 9–11, 2014, Tel Aviv, Israel.

[2014 American Physical Therapy Association Annual Conference](#), June 11–14, 2014, Charlotte, NC.

[Rehabilitation Engineering and Assistive Technology Society of North America \(RESNA\) 2014 Annual Conference](#), June 11–15, 2014, Indianapolis, IN.

[HCI International 2014](#), June 22–27, 2014, Creta Maris, Heraklion, Crete, Greece.

### July

[78th National Environmental Health Association \(NEHA\) Annual Educational Conference \(AEC\) & Exhibition](#) July 7–10, 2014, Las Vegas, NV.

[5th International Conference on Applied Human Factors and Ergonomics \(AHFE\)](#), July 19–23, 2014, Jagiellonian University, Krakow, Poland.

[2014 User Experience Professionals Association \(UXPA\) Conference](#), July 21–24, 2014, London, UK.

### August

[32nd International System Safety Conference](#), August 1–10, 2014, St. Louis, MO.

[122nd Annual Convention of the American Psychological Association](#), August 7–10, 2014, Washington, DC.

### September

[Engineering and Product Design Educational Conference 2014](#), September 4–5, 2014, University of Twente, NL.

[AutomotiveUI'14: The 6th International Conference on Automotive User Interfaces and Interactive Vehicular Applications](#), September 17–19, 2014, Seattle, WA.

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