

Puget Sound Chapter Launches “Technically Cool Computing”

By Kim Popovic, 2011 PSHFES Community Projects Chair

The HFES Puget Sound Chapter (PSHFES) is excited to announce that “Technically Cool Computing” (TCC) launched online this year. TCC is a user-friendly, 45-minute learning module that can be implemented by teachers or other volunteers to help educate fourth- through eighth-grade schoolchildren about appropriate computing posture, as well as quick and practical ways to adapt their computer workstations to reduce exposure to risk factors for musculoskeletal disorders. A free activity kit is available at <http://www.pshfes.org/tcc>. This educational tool is in line with two of PSHFES’s missions: to provide volunteer opportunities for HFES professionals to contribute to the Puget Sound community, and to raise public awareness of the value and benefits of human factors/ergonomics.

Literature Review

In 2007, PSHFES decided to focus on educating kids about ergonomics and formed the Ergonomics for Schools Project Committee. We found that very limited educational materials geared toward kids were available online in the United States and that we could not easily adapt the little we found internationally. Our literature review revealed evidence that both children and adults have experienced discomfort while at the computer. Among several studies reporting discomfort among children was a 2009 publication by Karen Jacobs, S. Hudak, and J. McGiffert (“Computer-Related Posture and Musculoskeletal Discomfort in Middle School Students, *WORK*, Vol. 32, pp. 275–283) finding that 40%–58% of middle schoolchildren surveyed reported discomfort while using the computer. Additional articles suggested that pain in childhood may be a predictor of future discomfort and an increased risk of musculoskeletal injury in adulthood. Studies have also found that children’s body postures at the computer are awkward in part because most equipment and furniture does not fit their smaller stature, which can increase the risk of discomfort and injury.

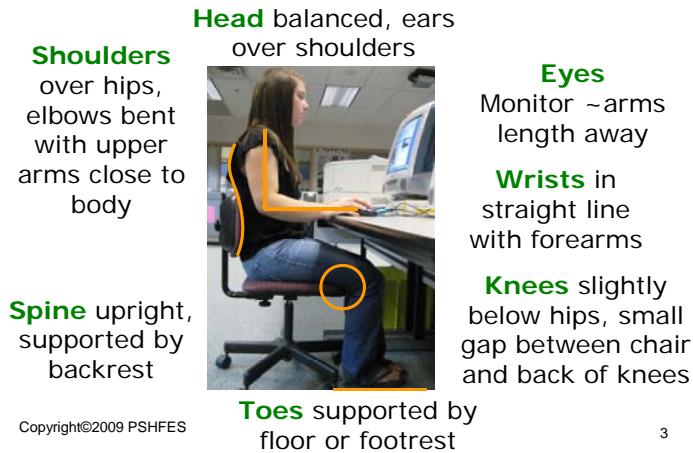
Given these findings, we decided to focus primarily on fourth- through eighth-graders because, on average, children in this age range often must use larger furniture and equipment (e.g., mice and keyboards) that are intended for use by adults. We also could not find much educational material targeted toward this younger age group.

TCC Features

The Technically Cool Computing Activity Kit is a collection of documents to guide those without ergonomics experience in teaching children appropriate postures while at the computer. The kit includes a letter directed to educators and a letter for parents explaining the purpose of the program. It also includes a PowerPoint presentation for use in classes, with notes to guide the instructor. The presentation depicts awkward postures that have been corrected with simple, everyday items. We have found that this educates not only the children but the instructors as well.

The Activity Worksheet helps the instructor lead children as they work in pairs to look at each other’s arms, shoulders, head, knees, toes, spine, and eyes to detect awkward postures. The Problem-Solving Worksheet gives clear and practical suggestions about how to correct awkward postures. There is now a “TCC Train the Trainer” video, courtesy of GoErgo, at <http://www.iinet2.org/GoErgo/Details.aspx?id=25504>. Finally, a brief survey at www.pshfes.org enables those who have used the TCC kit to provide feedback and results. We hope to receive enough feedback to help us track outcomes and make modifications to the kit.

The Power Pose



This TCC PowerPoint slide illustrates the “power pose,” which helps teach kids that if they work at the computer in this posture, they’ll get their homework done more quickly and have more energy for other activities they enjoy.

One of the challenges PSHFES has faced is finding the time to work with busy teachers and schools, but our persistence has started to pay off. Our chapter has piloted this project with several fourth-, fifth-, and sixth-grade classes in the greater Seattle region with great success. In our first class project in 2009, which used an initial iteration of the curriculum, 72% of students were able to recognize risk-producing postures and 61% of students were successful in correcting postures at their computer workstations. In addition, 89% of students felt they could repeat the exercise at home on their own computers.

After the first several pilot classes, we made drastic improvements to the handouts and curriculum. In the most recent pilot classes in 2010, which used the current TCC activity kit, 100% of the students reported they were able to recognize awkward postures and also were successful in improving their postures at their classroom workstations. As a result of one of the pilot classes, something exciting was unintentionally discovered: The desks in the K–6 computer classroom were set to the highest setting, which meant the desks were too high for many of the fourth graders and therefore were much too high for most of the younger children. Later, the school varied the desk height to better fit the kindergarteners through sixth graders, which was very rewarding for the PSHFES ergonomists who led this class.

The PSHFES Schools Committee has decided that the next step is to spread the word about the TCC teaching kit. We presented TCC at the PSHFES Annual Symposium in 2010, which consisted of about 100 of the region’s ergonomists, physical and occupational therapists, engineers, vocational rehabilitation counselors, safety and health managers, and occupational health nurses. In January 2011, we hosted a train-the-trainer event in the Puget Sound area for about 30 people, focusing not only on the materials contained in the activity kit but also on discussing TCC with the attendees after the presentation. We were happy with the feedback and reception from the eclectic group of attendees in both groups, which included a few former teachers.

We launched the final version of the activity kit online in early 2011, just prior to the chapter’s TCC presentation at the Applied Ergonomics Conference. Following that presentation, GoErgo developed the train-the-trainer video, which provides in-depth instruction and guidance for using the TCC kit materials and valuable lessons learned throughout our experiences of teaching the class and developing the kit.

With so many children using a multitude of electronic devices at an early age, we believe it’s important to provide education for students to achieve comfort, efficiency, and safety in their computer habits to help ensure a healthier workforce in the future. As the Technically Cool Computing project continues to evolve, one of our primary goals is to publicize it so more people have

access to this free and effective program. Please join the discussion at PSHFES's Linked-In group to get updates about TCC and help us continue to develop and distribute the kit. For more information or to comment, please contact me at CommunityProjects@pshfes.org.

Kim Popovic, PT, is an ergonomics consultant with ErgoFitConsulting, Inc.

PUBLIC POLICY MATTERS

Call for Comments on Revision of Important Federal Research Regulations

By William C. Howell, Chair, HFES Government Relations Committee

As all federally funded researchers know, there are strict regulations governing the conduct of research with human subjects, including the requirement that an Institutional Review Board (IRB) review and approve research protocols.

Promulgated and adopted in the 1970s, the regulations created many problems for researchers, including the fact that different agencies and IRBs interpreted and applied them differently. Consequently, 17 major funding agencies got together sometime around 1991 to reach a common understanding, with HHS taking the lead in its 45 CFR 46 (Title 45, Part 46 of Code of Federal Regulations), hereafter known as "The Common Rule."

Although this resulted in significant improvements (including more clearly articulated lists of "exempted areas"), it didn't fix everything, so complaints have continued over the two decades since. Therefore, the government is now undertaking a revision of the "Common Rule" designed to address the remaining problems, and all interested parties are invited to review the draft and submit comments. The original deadline was September 26, but it has been extended to an as yet unknown date. Watch the HFES Web site for an update on the extended due date for comments.

The announcement and instructions for reviewing and commenting on the revision are presented below. The most intensive and relevant review of this revision is being carried out by the American Psychological Association, the link to which is <http://www.apa.org/science/about/psa/2011/08/human-research.aspx>. HFES members with an interest in these regulations are encouraged to respond.

OHRP solicits comments on proposed changes to the regulations for human research participant protections (The Common Rule)

On July 26, 2011, the Office of the Secretary of the Department of Health and Human Services (HHS), in coordination with the Office of Science and Technology Policy (OSTP) issued (<http://www.gpo.gov/fdsys/pkg/FR-2011-07-26/pdf/2011-18792.pdf>) an advance notice of proposed rulemaking (ANPRM) aimed at revising the current federal regulations for protecting human research participants (45 CFR 46, the Common Rule, located at <http://www.hhs.gov/ohrp/humansubjects/guidance/45cfr46.html#subparta>). These revisions are intended to reduce regulatory burden while providing better protection for human research participants, and facilitating valuable research. The deadline for receipt of comments is no later than 5:00 p.m. on September 26, 2011. Comments may be submitted online through the Federal eRulemaking Portal, which can be found at <http://www.regulations.gov>. Enter the docket ID number (HHS-OPHS-2011-0005) in the "Enter Keyword or ID" field and click "Search." On the next page, click on "Submit a Comment" and follow the instructions. You may also submit comments by hard-copy to: Jerry Menikoff, M.D., J.D., OHRP, 1101 Wootton Parkway, Suite 200, Rockville, MD 20852. Any comments received will be posted to <http://www.regulations.gov>.

Submit Your Proposal for the 2012 Symposium on Human Factors and Ergonomics in Health Care

HFES welcomes proposals for the 2012 Symposium on Human Factors and Ergonomics in Health Care, to be held March 12–14 at the Baltimore Marriott Waterfront Hotel in Baltimore, Maryland. The deadline for submissions is 5:00 p.m. Pacific time on *Friday, September 30, 2011*.

The objective of the symposium is to bring together professionals and other stakeholders in both the scientific and practice realms of the health-care community and to bridge knowledge gaps among them. HF/E professionals will present the latest research, best practices, and case histories.

The symposium will address a variety of topics and perspectives in health-care human factors/ergonomics, organized along three main tracks:

- Patient and Health-Care Provider Safety
- Health-Care Information Technology
- Medical Device Design

Proposals are invited on topics such as emergency room management, patient handling, public health, home health care, electronic health records, health-care information systems, medical information technology, design of medicine/drug delivery devices, usability testing, and regulatory requirements.

Information and instructions about proposal submissions are available at http://hfes.org/web/HFESMeetings/HCSymposium_CallforProposals.html. Decision letters will be sent via e-mail by November 7.

More information—including event and hotel registration—can be found on the symposium Web site: <http://www.hfes.org/web/HFESMeetings/HealthCareSymposium.html>. We look forward to seeing you in Baltimore!

Paper on Automation in Surgery Wins 2011 Human Factors Prize



The *Human Factors* Prize Board of Referees has awarded Dietrich Manzey, Maria Luz, Stefan Mueller, Andreas Dietz, Juergen Meixensberger, and Gero Strauss the 2011 *Human Factors* Prize for their article, “Automation in Surgery: The Impact of Navigated-Control Assistance on Performance, Workload, Situation Awareness, and Acquisition of Surgical Skills.”

The 2011 Prize topic was health-care ergonomics, broadly defined to include research at the intersection of health care and human factors/ergonomics. The paper by Manzey et al. reports a pair of studies designed to investigate the performance consequences of advanced automated navigation support for surgeons. These navigation systems support the surgeon’s spatial orientation in the operative site by automatically identifying the position of the surgical instrument and displaying it in relation to the patient’s anatomical structure on a navigation screen.

The principle of *navigated control*, which was the focus of Manzey et al.’s research, represents the latest advancement in automated navigation support. The results of their research demonstrate that navigated-control assistance provides benefits for patient safety and surgical outcome, though such assistance can slow performance, increase subjective workload and attentional demands, and reduce situation awareness.

The submissions were judged on criteria that included importance of the implications for health care, originality of the research, contribution to the HF/E knowledge base, and soundness of the methodology.

The award includes a \$10,000 cash prize and publication of the winning paper in the December 2011 issue of *Human Factors*. The award will be presented at a special session on Wednesday, September 21, at the upcoming HFES 55th Annual Meeting in Las Vegas, where the recipients will present their work.

Four finalists (listed in alphabetical order) were also recognized by the Board of Referees:

- “Continuously Informing Vibrotactile Displays in Support of Attention Management and Multitasking in Anesthesiology,” by Thomas K. Ferris and Nadine Sarter
- “Development and Validation of a Virtual Reality Simulator: Human Factors Input to Interventional Radiology Training,” by S. J. Johnson, S. Guediri, C. Kilkenny, and P. Clough
- “Improving Medication Management through the Redesign of the Hospital Code Cart Medication Drawer,” by Justin B. Rousek and M. Susan Hallbeck
- “Promoting Colorectal Cancer Screening in Outreach Campaigns,” by Tamera R. Schneider, Markus A. Feufel, and Hans J. Berkel

The topic for the 2012 *Human Factors* Prize is **the human factors/ergonomics science behind product design**. Details are at <http://www.hfes.org/web/pubpages/hfprize.html>.

September 30 Webinar: Neuroergonomics Theory and Methods

Plan to attend the September 30 Webinar, **Neuroergonomics Theory and Methods**, presented by Raja Parasuraman from George Mason University. The webinar will be held at the following times:

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

About the Webinar

Neuroergonomics is the study of brain and behavior at work. So long as the advantages and limitations are appreciated, an examination of the neural mechanisms underlying cognitive and physical work can enhance the understanding of human performance and improve the design of human-machine systems.

In this webinar, Raja Parasuraman will outline the major theoretical frameworks of neuroergonomics and discuss neuroergonomics methods and tools, focusing on three major categories: neural, computational, and genetic. A framework that characterizes the merits and disadvantages of neuroimaging methods (fMRI, EEG, fNIRS, etc.) will be described. Next, the use of machine learning of neurocognitive states for use in adaptive systems will be discussed. Finally, genomic methods for the characterization of individual differences in human performance will be described, with a discussion of implications for selection and training.

The webinar is aimed at HF/E researchers and practitioners with no experience in the use of neuroergonomics tools who wish to learn how to use them, and to those who have used such methods previously but would like to be updated about the latest state-of-the-art methods and issues.

About the Presenter

Raja Parasuraman is University Professor of Psychology at George Mason University and director of the Center of Excellence in Neuroergonomics, Technology and Cognition (CENTEC). He is also director of the Graduate Program in Human Factors and Applied Cognition. Parasuraman received a BSc (1st Class Honors) in electrical engineering from Imperial College, University of London, and a PhD in psychology from Aston University, Birmingham, UK. He has long-standing research programs in human factors and cognitive neuroscience. His books include *The Psychology of Vigilance*, *Varieties of Attention*, *The Attentive Brain*, and *Neuroergonomics: The Brain at Work*. Parasuraman is a Fellow of the Human Factors and Ergonomics Society, the Association for Psychological Science, and the American Association for the Advancement of Science.

Full information, including how to register, are available at <http://www.hfes.org/web/webinars/septemberparasuraman.html>.

Bylaws Revision Ballots in the Mail

In the July *HFES Bulletin*, President-Elect and Policy and Planning Committee Chair Mica Endsley discussed proposed changes to the HFES Bylaws, which were unanimously approved by the Executive Council. Her article containing the proposed revisions can be found at <http://www.hfes.org/web/HFESBulletin/Jul2011bylaws.html>. Changes to the Bylaws also require a vote by eligible members.

Bylaws ballots were sent to voting members on August 31 and must be returned via postal mail or fax to the Central Office by October 14. Please complete and return your ballot promptly.

Register for Puget Sound Chapter's Ergonomics Symposium & Workshop

The HFES Puget Sound Chapter (PSHFES) has put together a great line-up of speakers for this year's ergonomics symposium and workshop, to be held September 14–15 at the Museum of Flight in Seattle, Washington.

The keynote speaker on September 14 is David Rempel, a professor of bioengineering and director of the Ergonomics Graduate Training Program at the University of California, Berkeley, and a professor of occupational and environmental medicine at UC San Francisco. Rempel has been part of a multisite study of upper-extremity injuries and risks in a variety of occupations.

Addition presentations include the following:

- The Aging Workforce
- Implementing Participatory Ergonomics in the Grocery Industry
- Ergonomics Program at Genie Industries
- Defining What Makes a Product “Ergonomic”
- Ergonomics Program and the Use of Immersive Technology at Ford Motor Company
- Nicaraguan Coffee Bag Research Project

The workshop, “Integrating Lean With Ergonomics,” presented by Jeff Smagacz takes place on September 15. Smagacz is an industrial engineer and a lean practitioner. The first part of the workshop will be a primer on lean manufacturing principles, after which Smagacz will address how ergonomics and lean principles combine to reduce injury risk factors in the workplace.

Go to <http://www.pshfes.org> for symposium and workshop fees and to register for the event.

Erratum: August 25 Webinar: “Design of a Public Urinal”

The sponsor of the 2010 Dieter W. Jahns Student Practitioner Award is the Foundation for Professional Ergonomics, not the Board of Certification in Professional Ergonomics, as was incorrectly stated in the August issue of the *HFES Bulletin*.

ANNUAL MEETING

Last Chance to Reserve Your Career Center Interview Space

The HFES On-Site Career Center provides an outstanding opportunity for employers and job seekers to meet informally and in prearranged interviews. The 2011 Career Center hours are as follows:

- Monday, September 19, 1:00 to 6:00 p.m.
- Tuesday, September 20, 8:30 a.m. to 6:00 p.m.
- Wednesday, September 21, 8:30 a.m. to 5:30 p.m.
- Thursday, September 22, 8:30 a.m. to 5:00 p.m.

Subscribers to the HFES online Career Center may reserve booths, tables, or both at the On-Site Career Center. Download a reservation form from http://www.hfes.org/web/CareerCenter/2011_onsite_reservation.pdf, or contact HFES at 310/394-1811 or placement@hfes.org.

Employers are encouraged to post job openings on the HFES Web site at <http://careercenter.hfes.org/hr/jobs/> as soon as possible. This will provide candidates the time to search the database and give employers time to review résumés and schedule meetings with potential candidates. The scheduling of formal or informal interviews at the Annual Meeting is the sole responsibility of the prospective employer.

Candidates looking for a job or seeking new career opportunities are encouraged to post their résumés and search for jobs in the online Career Center on the HFES Web site. This service is for HFES members only.

If you plan to be available for interviews at the Annual Meeting, bring copies of your résumé to the meeting and visit the Online Career Center (<http://www.hfes.org/web/CareerCenter/Placement.aspx>) to see a listing of employers conducting interviews during the Annual Meeting. Check back often, as this list will be updated frequently.

Daily Newsletter Items Wanted

The HFES 2011 Annual Meeting newsletter, *The High-Roller Herald*, is now accepting items for publication. Send your submissions via e-mail and indicate the issue in which you would like it to appear (issues are printed Monday through Thursday). Please submit dates and locations for university reunions or other meetings as early as possible.

If you would like to submit an article or learn more about how you can become involved with *The High-Roller Herald*, please contact Newsletter Chair Celeste Adamson at celeste.adamson@gmail.com.

Correction: Early-Career Professionals Reception

At the bottom of page 4 of the HFES 55th Annual Meeting Registration Information brochure (#S4 under Social Events), the date and time of the Early-Career Professionals Reception is incorrectly listed. The correct date and time are **Wednesday, September 21, 5:30–7:00 p.m.** The brochure has been corrected and may be found at http://www.hfes.org/Web/HFESMeetings/2011_RegBrochure.pdf.

The Early-Career Professionals Reception is a first-time event that 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.

OTHER NEWS

UK Energy Institute Updates Human Factors “Briefing Notes”

By Bill Gall, Kingsley Management Ltd, Energy Institute Human and Organizational Factors Committee Member

First published in 2003 by the Institute of Petroleum (now the Energy Institute) in London, an information pack of introductory guidance on human and organizational factors topics was recently reissued in enhanced and updated form.

Background

The Energy Institute (EI) is the UK’s professional body for the energy industry. One of its strategic aims is to provide useful tools and training on issues of importance to the energy and allied industries. EI has a close relationship with the Health and Safety Executive (HSE)—the body responsible for enforcing health and safety regulations in UK industries. HSE inspectors are active members of a number of EI committees, including HOFCOM (the Human and Organisational Factors Committee), which has convened almost 50 times since its inception in 2002. HSE also provides funding and support to EI for its technical work.

During the course of their regulatory work (site visits, audits, safety case assessments, and accident investigations) HSE inspectors noticed that a number of themes recurred across a wide range of industries—including chemical, nuclear, oil, and gas—which they termed their “top 10” human factors issues, including communications, alarm overloads in control rooms, ergonomic design, change of management, and maintenance problems.

Development of the Briefing Notes

HOFCOM decided that the top 10 issues would be a good place to start in providing advice to industry on human and organizational factors. From the outset it was decided that any guidance had to be short and to the point, easy to read, and focused on real issues, and to have practical application. These requirements determined the format and content of the material, which takes the form of a pack of 20 “Briefing Notes.” For example, BN#5 on fatigue describes what is meant by fatigue; the problem with fatigue in terms of human health, safety, and performance; and typical symptoms in a self-assessment checklist.

The checklist enables the user to diagnose if the problem exists in the workplace and provides further information on the subject. If the checklist suggests there is a problem, the Briefing Note describes practical steps the company can take and management responsibilities for controlling fatigue risks; outlines an HSE-derived tool for assessing the fatigue and risk potential of a given shift pattern; illustrates the problem (and some solutions) further with real-life case studies;

provides leading and lagging indicators that can be used to detect the problem; and contains a reference list with further reading on the subject.

The Top 10 Human and Organizational Factors Issues

From a top 10 issues, EI developed 20 Briefing Notes, including BNs on several other topics and on some practical methodologies. The 2003 edition included task analysis, human reliability analysis, violations (noncompliance or circumventions), behavior observation and modification, root cause analysis, and human factors integration.

The project to revise the BNs began with a survey encompassing BN users, industry health and safety specialists, regulators, and human factors experts, some of whom had not previously seen the material but were complimentary about it. Respondents could comment on the usefulness of the material and suggest changes in the form or content and indicate which, if any, further topics should be included. The consensus was to retain the existing 16, to update the cases studies and references—particularly in light of more recent incidents—and to add four subjects of interest: performance indicators—leading and lagging indicators of HF problems, leadership, pressure and stress, and occupational versus process safety, explaining the important differences.

Reconciling all the survey comments was a challenging but useful exercise. The 2011 issue of the Briefing Notes was recently released and may be downloaded free from the Energy Institute's Web site at <http://www.energyinst.org/hfbriefingnotes>.

The EI Web site also includes a list of resources for human and organizational factors, reading materials, and useful practical tools for the novice or advanced user.

HSE's top 10 human factors topics and guidance material may be accessed at <http://www.hse.gov.uk/index.htm> (search for "human factors key topics").

Bill Gall is an independent human factors consultant advising primarily on human reliability, safety management and safety culture. Portions of this article also appeared in the August issue of Petroleum Review.

AHRQ Releases Report on Consumer Health Informatics Applications

A report funded by the Agency for Healthcare Research and Quality (AHRQ), *Improving Consumer Health IT Application Development: Lessons from Other Industries: Background Report*, found that across the diverse range of methods used in the design of successful consumer products, common underlying characteristics that represent best practices in system construction could be applicable to the development of consumer health informatics applications. The authors conducted a review of prior work related to core concepts in product design and the stages involved in consumer product design. They also examined design practices used in the development of a wide range of IT products embraced by the public and found, among other things, that the most successful products use methods that incorporate high levels of user involvement and iteration and engage human factors experts who pay careful attention to user characteristics.

The report is available at <http://healthit.ahrq.gov/developmentmethodsbackgroundreport>.

FAA Announces Student Design Competition

The Federal Aviation Administration (FAA) is once again offering the Design Competition for Universities for the 2011–2012 academic year, with new design categories. The competition challenges individual students or teams of students (undergraduates and graduates) from U.S. colleges and universities, working under the mentorship of a faculty adviser, to address challenges in four broad areas: airport operations and maintenance; runway safety/runway incursions/runway excursions; environmental interactions of airports; and airport management and planning.

Cash prizes will be given to first-, second-, and third-place winners in each category. The first-place winners will present their design solutions at the FAA/TSA/ACC Summer Workshop Series in Arlington, Virginia, July 18–19, 2012.

Competition guidelines and full details are available at <http://faadesigncompetition.odu.edu>.

HUMAN FACTORS AND APPLIED COGNITION GEORGE MASON UNIVERSITY

The Department of Psychology has a tenure-track, junior-level professorship available to begin in Fall 2012. We seek cognitively oriented human factors researchers who closely integrate theory and application. The position is open to a variety of research specializations, as long as the research advances cognitive theory in the context of real-world problems. We particularly seek researchers working on applications in areas such as, but not limited to, transportation, health care, human-computer interaction, and robotics. The successful candidate will be part of the Arch Lab, which consists of 7 full-time faculty and about 40 graduate students. Arch Lab members conduct research in attention, audition, interruptions, memory, vigilance, and visual perception as applied to such domains as automation, aviation, driving, and robotics. Work in the lab is primarily focused on behavioral and computational methods, but neuroergonomic techniques are also used in some of our research. The successful candidate will be expected to teach undergraduate and graduate classes, including required and seminar courses in topics in human factors, and demonstrate scholarship capable of attracting external funding. Candidates for higher ranks may be considered if they are able to bring external research funding with them. Additional information on the Human Factors and Applied Cognition program can be found at <http://archlab.gmu.edu>. Applicants must apply online at <https://jobs.gmu.edu> and write in position number **F8792z**.

George Mason University is an innovative, entrepreneurial institution with national distinction in a range of academic fields. Enrollment is over 32,000, with students studying in over 185 degree programs at campuses in Arlington, Fairfax, Loudoun and Prince William. George Mason University is an equal opportunity employer encouraging diversity.



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