

Communiqué

Newsletter of the Southern Ohio Chapter, Human Factors & Ergonomics Society

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Web Site <http://www.cs.wright.edu/sochfes/>



March, 2005: “In like a lion ... and out like a lamb?!”

That’s certainly better than the alternative “In like a lamb and out like a lion”, right? To help you survive this nasty weather, allow me to take you on a “spring visualization experience”. Pretend you are closing your eyes (as you can’t and also ready this!), relaxing on a comfortable lounge chair in your back yard. Feel the warmth of the sun envelop your body. Overhead you hear squawking arcing above your head as a flock of birds fly over. To your left is the sizzling sound from steaks cooking on your grill. From your right you hear “thump, thump, ker-pling” as a basketball is dribbled and bounced off the rim. These sounds from their respective locations help make your spring visualization more real. Well, now it is possible to augment many applications with “spatial sounds”. Technological advances have enabled signals to be presented over headphones such that they are perceived to originate from different locations and distances from the listener! There are numerous potential applications of this technology as well as human factors issues to be addressed!

At our March brown-bag meeting, we will have the opportunity to *hear* all about “spatial auditory displays” from Brian Simpson, a research psychologist at the Air Force Research Laboratory! This is a great opportunity to get up to speed on this exciting new display technology! Be sure to mark your calendars: Wednesday, March 16, at Wright State. Details on the next page!

Spring also marks our Chapter’s involvement in Science Fair Judging! Bottom line: Glenn Wilson needs volunteers to help judge on March 19, Central State University!

Besides providing more details on the Science Fair, this newsletter has a column introducing you to our Treasurer, Scott Galster (who anxiously awaits your dues and directory update) and news on our new Chapter members, the Society’s Chapter Award, upcoming anniversaries, and an opportunity to be on TV! What the newsletter doesn’t have is a column on the Chapter Web Site. So, I’d like to close by reminding you to check it out, and to send your pictures (cleared with your employer) illustrating “human factors work” to scott.galster@wpafb.af.mil. Jesse Walker, our Webmaster, will be using them to make our Website even snazzier! Thanks! Gloria Calhoun



Human Factors and Ergonomics Society/Southern Ohio Chapter

Mr. Brian Simpson

Air Force Research Laboratory & Wright State University

Spatial Audio Displays:

Generation and Applications

Invited Speaker!!!

Brown-Bag Lunch

Wednesday, 16 Mar '05, 1130-Wright State Univ.

Rm 339, Fawcett Hall Presentation starting about 1145

Recent advances in technology have led to increases in the rate of information presented to human operators in complex operational settings (e.g., cockpits, command and control centers). Most current interfaces emphasize the presentation of information via visual displays, thus placing great demands on the visual information processing capacity of the operator. In an effort to lessen these demands, a great deal of research has been focused on the feasibility of interfaces that present information to other sensory systems. Auditory displays, in particular, have shown great promise. The human auditory system, in addition to playing a major role in communication, functions as an early warning system, alerting operators to the presence of critical events, even when they occur outside the visual field of view. However, auditory warnings and communication systems, as currently implemented in most existing operational systems, do not take advantage of the spatial auditory processing capabilities of humans. That is, the ability of humans to determine the location of a sound source, and moreover to monitor events at multiple locations simultaneously, have not been fully exploited. Spatial audio (3-D audio) display technologies take advantage of the capabilities of the auditory system by recreating and presenting to an operator the spatial information that would naturally be available in a “real-world” listening environment. 3-D audio displays are intuitive and impose few additional demands on the information processing capacity of the operator. Furthermore, research suggests that performance on many tasks is vastly improved with 3-D audio displays as compared to performance with standard single-channel audio systems. Thus, in many applied settings, 3-D audio displays have the potential to improve performance, enhance situation awareness, and reduce workload.

In this talk, the process by which spatial audio displays are generated will be described, as well as potential applications for these displays. Some recent data from our laboratory will be presented that demonstrates the utility of spatial audio in complex environments.

Mr. Simpson received a M.S. in Human Factors/Industrial Organizational Psychology in 2002 from Wright State University, where he is currently a Ph.D. candidate. He is also an Engineering Research Psychologist in the Battlespace Acoustics Branch at the Air Force Research Laboratory.

Mr. Simpson is a member of the Human Factors Society, the Acoustical Society of America, and the Association for Research in Otolaryngology, and serves as a reviewer for several journals.

Mr. Simpson’s research interests include understanding and modeling the underlying mechanisms of binaural and spatial hearing, as well as auditory attention, auditory displays, and virtual environments.

Directions: WSU campus is between visitor's parking lot on north side & Colonel Glenn Hwy on south side. Roads entering campus off Colonel-Glenn, University Blvd. (across Wendy's) & Center/Loop, have signs to Visitor Lot #6. From lot, walk towards campus, going between Rike & Allyn Hall towards mall area. Then veer left to get on east side of Oelman. Once there, Fawcett Hall is straight ahead (Room 339A). Bring Parking Ticket for stamping! Map available at http://www.wright.edu/aboutwsu/maps/map_bw1.html. Questions: Greg Barbato at 937-255-6670.

Science Fair Judging

For the last few years, our Chapter, together with the local chapter of the Society for Information Display (SID), has presented awards for outstanding Human Factors/Information Display projects at the West District Science Fair. SID foots the bill and our Chapter judges the projects and makes the awards. We'd like to repeat this process this year! Veteran judge Glenn Wilson has agreed to again coordinate our Chapter's contribution to this event. Given there are lots of projects, please check your calendar now for Saturday, March 19 and contact Glenn if you can help at Central State University, Wilberforce, OH. I think everyone involved in past years would agree that this is an enjoyable and rewarding experience. Yes, you'll be sacrificing a Saturday morning, but you will leave with a good feeling that you've made a contribution to our youth and profession. Never judged before? Don't worry; you'll have guidelines and be teamed with another judge. So, PLEASE offer your services to Glenn Wilson, coordinator (255-8748; <mailto:glenn.wilson@wpafb.af.mil>).

Spotlight on the Chapter's 2004-2005 SOH Treasurer - Scott Galster

I would like to take this opportunity to introduce myself to those who do not know me and share a few tidbits of information about myself (yes, our wonderful President Gloria has asked me to do this). I am married and have two children, reside in Mason, OH and work at Wright Patterson Air Force Base. I received my Ph.D. in Experimental Psychology from The Catholic University of America where I studied automation in aviation systems with my advisor, Raja Parasuraman. I currently do research at the Air Force Research Laboratory (AFRL/HECP) in the Battle Management Command and Control domain. This includes research in advanced visual displays, decision effectiveness, and human-interaction with automation to name a few. I also serve as the Program Manager for the Advanced Research Program for the Multi-Sensor Command and Control Aircraft (MC2A). What is most important here is that I currently serve you. I was elected Treasurer to serve the members of the SOH. If there is anything that I can do in this capacity that may help you; please let me know. Otherwise, I can only beg for you to please, please, pay your dues...right now, today, go get a pen! (*Honorary members: Exempt; Full-time Students: \$5; Others: \$10; address on page 1*)

New Chapter Members - Welcome!!

Kevin Bennett not only was our very interesting speaker at the last meeting, but also a new member! Kevin is a professor and Director of the Human Factors/Industrial Engineering Graduate Program at Wright State. Although he's new to our Chapter, he's been very involved at National, serving on the Editorial Board for over a decade. Just recently he was elected HFES Fellow! As we learned from his presentation, he's very interested in display and interface design, as well as computerized decision support. And we learned Kevin is HOT! (*you had to be there!*).

Janet and Dave Williamson are our other new members – or should I say returning members? Both Janet and Dave got their B.S.E. in Human Factors Engineering at Wright State and their Masters in Engineering Management at the University of Dayton. Janet works for General Dynamics and is interested in human computer interaction, as well as test and evaluation. Dave works in the Air Force Research Laboratory's speech recognition program.

Missing Chapter Records

Portions of SOH Chapter files (in one or two boxes) are still missing in action. Most of the files contain historical data related to the chapter's earliest years dating back decades. Especially if you've served on the Executive Council during 1995-2000, we'd appreciate if you could check your home storage areas for these files. If they resurface, please contact any current chapter officer. Thanks!

Happy Anniversary!!! Is it 40th or 50th??

It's both! Our Chapter is 40 years old this year!! Actually, the Chapter was accepted as an affiliate in October of 1964, but records show that 1965 marked the first year officers were in place. Benjamin Schohan, the first President is still on our membership roll!

And the Society will celebrate its 50th starting with the 50th Annual Meeting in San Francisco, October 16-20, 2006 through the 51st Annual Meeting in Baltimore, October 1-5, 2007. Doug Harris is gathering ideas for activities, events and/or products that relate in some way to the anniversary. One item in his list to date involves collecting memories, pictures, videos, and memorabilia from folks that remember the early days of our Society. So, a special plea to our "seasoned" members for your Chapter and Society memories. More information will be forthcoming!

National's Distinguished Service Award for Local Chapters

In the last newsletter, I informed you of a new Chapter Award being considered by National. Upon further checking, we've learned that the award process will probably not be implemented for another year. So, the pressure will be on our next slate of officers to posture our Chapter for the award! Meanwhile, the Chapter Executive Council is exploring possibilities for the distribution of a Human Factors Brochure to young students. This would help promote student knowledge of human factors and impact a community group not affiliated with HFES. So, with this planning, our Chapter has a good start to be considered a "Distinguished Chapter" – next year!

Future Emmy Award?

We've learned from National that they are interested in identifying newsworthy work in the human factors/ergonomics field that might be featured in a 60-second TV science news spot. This is part of the HFES collaboration with the American Institute of Physics' Discoveries and Breakthroughs Inside Science program, an outreach effort that aims to inform the general public about important scientific activities (see <http://www.aip.org/dbis/>). The work can be either research or practice-oriented and must be G-rated! Forward your ideas directly to Lois Smith (lois@hfes.org) with a description of the work, the names and contact information of those doing the work, and why you feel it is newsworthy and would make a good TV news spot.

Upcoming Events Outside of SOH

Mar 18-20, 2005
Mar 28-Apr 1, 2005
Mar 29-Apr 1, 2005
Apr 2-7, 2005

IEEE VR 2005 Conference, Pisa, Italy, <http://www.vr2005.org/view.php?nid=0>

SPIE, Orlando, FL, <http://myspie.org>

Web3D 2005 Symposium, Bangor, UK, <http://www.hpv.informatics.bangor.ac.uk/s2005/>

CHI Computer Human Interaction 2005, Portland, OR, <http://chi2005.org/>

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| Apr 5-7, 2005 | Ergonomics Society Annual Conference , Hertfordshire, UK, http://www.ergonomics.org.uk/events/AC2005call.htm |
| Apr 10-15, 2005 | Inter Society for Performance-Improvement Conf , Vancouver, Canada, http://www.ispi.org/ |
| Apr 11-15, 2005 | World Aviation Congress , Detroit, MI, http://www.sae.org/calendar/wac/ |
| Apr 18-21, 2005 | International Society of Aviation Psychology , Oklahoma City, OK, http://www.wright.edu/isap/ |
| May 16-19, 2005 | 14th Conf on Behavior Rep in Modeling & Sim , Universal, CA, http://www.soisostds.org/cgf-br/05BRIMS/index.htm |
| May 24-28, 2005 | Int Conf on Enterprise Information Systems , Miami, FL , Orlando, FL, http://www.iceis.org |
| Jun 2-3, 2005 | Human-Computer Interaction Lab Symp , College Park, MD, http://www.cs.umd.edu/hcil/soh/ |
| Jun 15-17, 2005 | Naturalistic Decision Making , Amsterdam, Netherlands, www.ndm7.org |
| Jun 20-22, 2005 | Human Systems Integration Symp , Arlington, VA, http://cedm.hfes.org/HSISCall4Papers.pdf |
| Jun 28-30, 2005 | AUVSI's Unmanned Systems 2005 , Anaheim, CA, http://auvsi.org/ |
| Jul 21-25, 2005 | 27th Annual Meeting of the Cognitive Science Society (CogSci) , Stresa, Italy, http://www.cognitivesciencesociety.org/cogsci.html |
| Jul 22-27, 2005 | 1st Augmented Cognition International/HCI International , Las Vegas, NV, www.augmentedcognition.org , http://www.hci-international.org/ |
| Jul 31-4 Aug, 2005 | ACM Siggraph 2005 , Los Angeles, CA, http://www.siggraph.org/s2004/ |
| Aug 15-18, 2005 | American Institute of Aeronautics & Astronautics (AIAA) Modeling and Simulation Technologies Conf & Exhibit , San Francisco, CA, http://www.aiaa.org/calendar/index.htm |
| Aug 22-26, 2005 | 23rd International System Safety Conference , Providence, RI, www.system-safety.org |
| Sept 12-16, 2005 | Interac, Int Conf on Human-Computer Interaction , Roma, Italy, http://www.interact2005.org/ |
| Sept 14-17, 2005 | ICINCO 2005, Int Conf on Informatics in Control, Automation, and Robotics , Barcelona, Spain, http://www.icinco.org/ |
| Sept 20-22, 2005 | Safety Across High-Consequence Industries (aviation & health care) , St Louis, MO, http://parks.slu.edu/msasm/conf_home.htm |
| Sept 26-30, 2005 | 49th Annual Meeting of the HFES , Orlando, FL, http://hfes.org/ |
| Oct 24-26, 2005 | 43rd Annual SAFE Symp , Salt Lake City, UT, http://www.safeassociation.org/symposium.htm |
| Nov 14-16, 2005 | IASTED Conf on HCI , Phoenix, AZ, http://www.iasted.org/conferences/2005/phoenix/hci.htm |
| Nov 28-Dec 1, 2005 | Interservice & Industry Training, Sim & Education Conf , Orlando, FL, http://www.iitsec.org/ |
| Nov 30-Dec 2, 2005 | Driving Simulation Conference , Orlando, FL, http://www.catss.ucf.edu/pages/drivsimcftp.asp |
| Dec 12-15, 2005 | MODSIM05 – International Congress on Advances & Applications in Modeling & Simulation , Melbourne, Australia, http://www.mssanz.org.au/ |
| Jul 10-14, 2006 | IEA 2006 International Ergonomics Association , Netherlands, http://www.iea2006.org/ |

SOH Chapter Info

SNAIL MAIL: Southern Ohio Chapter HFES, P.O. Box 31052, Dayton, OH 45437-0052

WEB SITE: <http://www.cs.wright.edu/sochfes/> — Includes Membership Application!!!

Executive Council

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Southern Ohio Chapter (SOH)
Human Factors and Ergonomics
Society (HFES)
 P.O. Box 31052
 Dayton, OH 45437-0052

Membership Form:
Application, Renewal, and Update

DIRECTIONS:

- To apply for new membership, fill all blocks, including those on the back of this form.
- To renew membership, fill first block only.
- To update directory information, fill first block and indicate changes in other blocks as appropriate.

PLEASE TYPE OR PRINT CLEARLY!!
 Send completed form and payment to address on the left.

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| Name: | _____ | YEAR |
| | First name or initial, middle name or initial, last name. | 200__ |

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| Employer Address: | Company _____ | |
| | Street _____ | |
| | City _____ | |
| | State/Zip OH _____ | |
| | Phone _____ | |

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| Home Address: | Street _____ | |
| | City _____ | |
| | State/Zip OH _____ | |
| | Phone _____ | |

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| Email Address: | Work: |
| Optional: Home email: | |
| Personal Website: | |
| Work/Company/Organization Website: | |
| Personal (resume) Website: | |

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| Preferred Mailing Address: | <input type="checkbox"/> | Work | <input type="checkbox"/> | Home |
| Preferred Phone: | <input type="checkbox"/> | Work | <input type="checkbox"/> | Home |
| Preferred Email: | <input type="checkbox"/> | Work | <input type="checkbox"/> | Home |
| Send Email Meeting Reminders: | <input type="checkbox"/> | Yes | <input type="checkbox"/> | No |

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|---|-------------|--------------------------|----------|--------------------------|--------------|--------------------------|-----------|
| Membership Status: | HFES | <input type="checkbox"/> | Member | <input type="checkbox"/> | Associate | <input type="checkbox"/> | Affiliate |
| | | <input type="checkbox"/> | Fellow | <input type="checkbox"/> | Not a member | <input type="checkbox"/> | Student |
| | SOH | <input type="checkbox"/> | Member | | | <input type="checkbox"/> | Student |
| (Membership categories on back.) | | <input type="checkbox"/> | Honorary | <input type="checkbox"/> | New | | |

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| Willing to Consult? | <input type="checkbox"/> | Yes | <input type="checkbox"/> | No |
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| Degree(s) , Major, College, Year: | |
| (maximum of two) | |

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| Work Specialties/Interests: | |
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