The Archie

Human Factors and Applied Cognition

Spring 2012 Newsletter

What's Inside

HFES Student Executive Council

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Greetings From the HFES Student Council President

Greetings Arch Lab members and supporters!

This spring has been another semester full of exciting events and opportunities for outreach. We held our annual alumni panel, hosted the HFES Potomac Chapter to the campus for lab tours and dinner, organized a portfolio night that was led by our very own Rob Youmans, and joined forces with the University of Central Florida HFES student group for a joint web symposium. Once again, we were involved in the U.S. Science and Engineering Festival, this year, in conjunction with HFES National Chapter and the HFES Potomac Chapter. This was a rewarding event where Arch Lab members spread the word about Human Factors to 150,000 festival attendees.

By all accounts, this was another successful semester for the Arch Lab and HFES Student Chapter, as evidenced by the continuing research and publications being cranked out (see pubs). But none of it would have been possible without your support. I would like to thank all of the alumni and local professionals who attended our events as well as all of the students that made these events so successful. I would also like to thank the wonderful executive council that I had the pleasure of working with this past year. None of these events would be possible without the hard work and dedication of the executive council members: Bridget Lewis, Stephanie Pratt, Christian Gonzalez, Allie Sleeman, Dan Gartenberg, Ross Thornton. The year was a success due to all of their hard work and effort. As I pass the reigns to Bridget Lewis, the current Vice President, I do so with confidence, knowing she will continue to improve the Student Chapter to new heights!

It was an honor to serve as the Student Chapter President this past year and I wish you all the best of luck in your future endeavors!

Congratulations to Masters Graduates

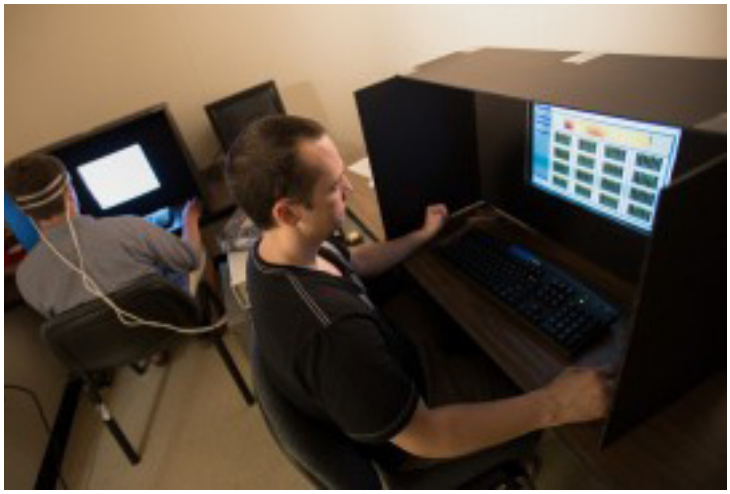
Congrats to:

William Benson
Jesse Eisert
Hsuan Chang
Christian Gonzalez
Patrick Thomas Huggins
Brian Kidwell
Bridget Lewis
Peter Manning
Ryan McKendrick
William Miller
Masood Mortazavi
Jaris Oshiro
Stephanie Pratt
Allison Sleeman
Johnathan Strohl
Ross Thornton

Semester Highlights

End of the year barbeque with most of the Arch Lab clan.

Raja and members of his lab were featured in a George Mason News story about the progress they are making in using Transcranial Direct Current Stimulation.



Semester Highlights

A roller skating outing with Bridget, Wendy, Stephanie, and Carryl

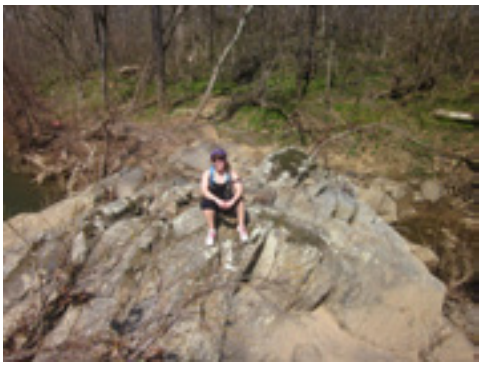
Hiking the around Northern Virginia - dogs invited!

Mason Fitness Challenge

By Bridget Lewis

This year 30 members of the Arch Lab and Psychology Department participated for the first time in the 3rd annual Mason Recreation Resolution Solution Fitness Challenge. The Fitness Challenge is a challenge put forth by Mason Recreation in order to get students, faculty and staff to be healthier and more active. Their goals involve raising awareness for the Mason Recreation Fitness and Wellness program, boosting morale and cohesion in the University Community through fitness, increasing awareness of Wellness by Mason (http://wellnessbymason.gmu.edu/) and to provide a unique opportunity for departments to compete in a fun and healthy challenge.

The challenge runs for 8 weeks. The rules are simple: 15 minutes of moderate exercise equals 1 point. Competitors are asked to submit points every week, and points are reported to the team leaders and then to the challenge organizers. This year the Department of Psychology (our team) came in third with a whopping 5365 points, trailing the winners by less than 500 and 200 points respectively. It was a fantastic opportunity and allowed for fun, fitness related events like roller skating and hiking all over the Northern Virginia area. For more information or to compete next year, see http://recreation.gmu.edu/wellness/resolution-solution.



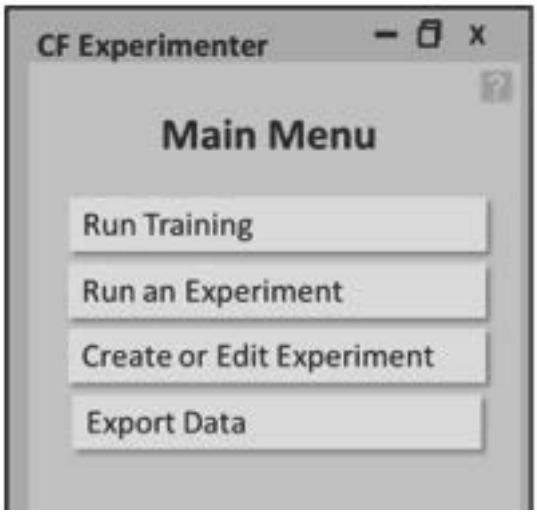
Student Research Inspired by Task Analysis Class

By Daniel Gartenberg, Christian Gonzalez, and Haneen Saqer

This year three class projects in Robert Youman's Task Analysis and Product Design classes were accepted as conference presentations at the Human Factors and Ergonomics Society 56th Annual Meeting! Below are brief descriptions of these projects that provide a glimpse into the wide scope of research that is conducted by the ARCH Lab.

Gonzalez, C., Benson, W., Pratt, S. M., Figueroa, I., Rhodes, D., & Youmans, R. (in press). Creating a computerized assessment of cognitive flexibility with a user-friendly participant and experimenter interface. Proceedings of the Human Factors and Ergonomics Society 56th Annual Meeting. Boston, Massachusetts.

Researchers are often faced with practical hurdles to data collection stemming from poorly designed research tools. In this set of studies, we utilized an iterative design process while developing a new assessment designed to test for individual differences in cognitive flexibility. The development cycle began with paper prototypes of the cognitive flexibility assessment, and ended with a computerized prototype research tool. In this paper we outlined the development process, and reported results from user testing that demonstrate how reliable methodology from the realm of product design can be successfully applied to create usable research tools in the field of psychology.



Eisert, J., Gartenberg, D., Thornton, R., & Youmans, R. (in press). Optimal interface location and limits of gesture proficiency in an automobile. In Proceedings of 56th annual meeting of the Human Factors and Ergonomics Society.

Another question that was investigated in Rob Youman's Task Analysis class was the optimal location of gesture based in-vehicle technology. The goal of this research was to prevent driver distraction by determining the best manipulative gestures that would accompany in-vehicle technologies. Three different vehicle locations and ten different driver gestures were evaluated. Participants in the study performed each of the gestures at all three locations. It was found that most individuals preferred using the steering wheel location and a repertoire of about 7 gestures was preferred. Our recommendation for an in-vehicle gesture based technology is therefore for the system to be placed at the three o'clock position on the steering wheel, with a maximum of seven gestures performed by the user.

Student Research Inspired by Task Analysis Class (Continued)

Saqer, H., Kidwell, B., & Youmans, R. (in press). Expanding the Usability Toolkit: Using PowerPoint™ to Perform Website Analysis and Testing. Proceedings of the Human Factors and Ergonomics Society 56th Annual Meeting. Boston, Massachusetts.

User experience practitioners employ a variety of usability software packages to assess consumer products, websites, and other human-machine systems. Unfortunately, many of these tools are expensive and require months of training. Our paper seeks to offer alternatives to the novice practitioner that are cost-efficient, easy to implement, and that do not possess steep learning curves. In a usability and redesign course, graduate students completed card sorting tasks with basic presentation software, PowerPoint™. The results from the card sorting task informed the design of a website prototype that was also created in PowerPoint™ and served as a testing environment for a usability assessment. The paper outlines the specific methods of using presentation software to conduct usability techniques and discusses the benefits of these methods.

Symposium with University of Central Florida

By Christian Gonzalez

This year we had the unique opportunity to collaborate with the HFES student group at the University of Central Florida on a student research symposium. While previous symposiums have provided targeted and focused student presentations similar to our weekly brown bags, we decided to take a slightly different tack with this event. Our goal was simply to foster discussion between our respective human factors programs by allowing students to talk about their research at a high level and investigate potential areas of collaboration on future projects.

"Google+ Hangouts" allowed us to share slides and ask questions back and forth with ease. Three students from each university gave informal five minute talks about their current research projects. GMU students, Brian Kidwell, John Strohl and Jesse Eisert presented a wide range of topics spanning automation, aviation, cognitive genetics, transcranial direct current stimulation and multimodal driver interfaces. Students from UCF, Shan Lakhmani, Ben Sawyer and former Arch Labber Adam Emfield, discussed their research on serious games, environments and performance and multi-driver simulations. The talks provided students an interesting perspective on other HF work in a more relaxed environment without necessitating a large organized meeting.

We plan to continue holding these symposiums in the future and are open to further suggestions from students on how to best to structure them. A big thank you goes out to the UCF student group for being so flexible with our equally demanding schedules. We are looking forward to the symposium next year and hope to see you all there!

Bridging the Gap: Human Factors in Healthcare

By Jaris Oshiro, Jonathan Strohl, and Savannah Sleicher

The Human Factors and Ergonomics Society (HFES) held their first ever symposium on human factors and ergonomics in healthcare. This 3-day event was recently held in Baltimore, Maryland. Several Arch Lab students made the short trip North on I-95 to explore the application of human factors in the emerging healthcare domain.

The symposium was unique in that it brought together manufacturers, healthcare providers, and policy makers to discuss their experiences in using human factors and ergonomics processes and principles. The conference was split into three tracks. A Patient and Health-Care Provider Safety Track, a Health Care IT Track, and a Medical Device Design Track. Each track catering to a different crowd of both human factors and health care professionals. The Patient and Health-Care Provider Safety track highlighted different patient safety techniques as well as various risk and litigation procedures that take place in the hospital setting. The Health Care IT Track was tailored to discuss issues in health care information technology. Lastly, the Medical Device Design track focused on the design of medical devices, including a talk by the Food and Drug Administration's (FDA) Human Factors division, who discussed the policies for device usability and pre-market testing.

A great example of how Human Factors can benefit the healthcare domain was a talk that Evan Edwards gave regarding his Intelliject project (see Figure 1). Intelliject was invited to share his idea for a redesigned personal auto-injector for diabetes patients. Having diabetes himself, he had personal experience with injectors, and specifically with poorly designed injectors. In fact, he quipped that he had gotten into the engineering field, while his twin brother got into the medical field, so that one day they could combine their knowledge to improve these auto-injectors for actual patients. Some of the recommendations that were implemented in the redesign included a smaller product design and verbal speaking instructions. Most auto-injectors currently on the market are shaped in the form of a large, bulky pen. This has been a conventional aspect of these injectors, and there is no standard reason as to why it is this way, as well as why it cannot be changed. Intelliject redesigned the standard auto-injector so that it resembled the size of a credit card, and could easily fit into someone's wallet or shirt pocket. In addition, Intelliject also added verbal, speaking instructions to their design, similar to the speaking instructions that are used with portable Automated External Defibrillators. This ameliorates the errors that were caused by people supporting the diabetic patient (for example a bystander), who were unfamiliar with using the old pen-designed injectors. In fact, occasional accidents would happen where these bystanders would inadvertently puncture their own thumb with the needlepoint of the pen, because they had held the pen in the opposite way.

Figure 1. Intelliject Project

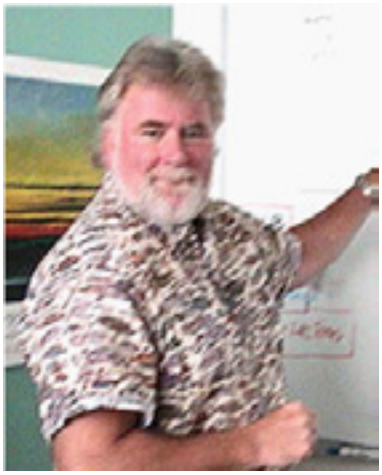
One aspect that made this symposium different from most was that it was focused on a central problem: How can human factors and ergonomics improve healthcare? This theme allowed for disparate experiences and expertise from a range of speakers, and contributed to a very interesting and stimulating event. The next symposium is already planned for March 11-13 2-13 in Baltimore, Maryland. Mark your calendars now!

Corker Award Announcement

For a second year the HFES student group worked with faculty to ressurect the Kevin Corker HFAC Outstanding Student Award. This award of five hundred dollars goes to the student of the Arch Lab who has excelled in research activities and who has demonstarted a committment to the advancement of the Arch Lab (as determined by a faculty committee). Last year's recipient of the Corker Award was Haneen Saqer. The excerpt bellow is reprinted from an earlier edition of the Archie and explains the history of this prestigious award:

* One of our colleagues in the human factors profession, Dr. Kevin Corker, passed away this semester. In honor of his memory, Dr. Peter Hancock started the Kevin Corker Arch Lab Student Award on February 6th 2008 during his lecture to the Arch Lab.

Dr. Kevin Corker 1953 - 2008



Dr. Corker was the former Director of the Graduate Program in Human Factors and Ergonomics. He was also a Professor of the Department of Industrial & Systems Engineering at San Jose State University. Dr. Corker published extensively on modeling of human and complex, dynamic and automated system interaction for applications from space operations, to commercial aviation safety, to military operations, to nuclear power plant operations.

Dr. Corker was a huge contributor to the college and loved mentoring his students. He was kind hearted and generous to all and lived his life with integrity and courage. Kevin enjoyed sailing, time spent with family and friends, reading, traveling and the outdoors. Dr. Corker's proudest career achievement was realized when he became a Professor and Associate Dean of the College of Engineering at San Jose State University. As a scholar and teacher, Kevin's passion was sharing his knowledge. This commitment was recognized by earning the Teacher of the Year award for the College of Engineering in 2005 along with numerous other professional awards and recognitions. In the spirit of Dr. Corker's bright and generous personality, this Annual Kevin Corker Arch Lab Student Award is in recognition for the student who has contributed significantly to the advancement of the Arch Lab.

Ewart de Visser is a Ph.D. candidate in Human Factors and Applied Cognition at George Mason University and works as a Human Factors Scientist at Perceptronics Solutions, Inc. Ewart's current research focuses on the neuroergonomics of human-automation trust, oxytocin, and human-automation etiquette. He also specializes in developing advanced adaptive planning and decision aiding interfaces to support unmanned vehicle systems. Ewart received his B.A. in Film Studies from the University of North Carolina at Wilmington and a M.A. in Human Factors and Applied Cognition from George Mason University.

Publications, Presentations, Applications & Awards

Publications

Baldwin, C. L. (2012). Auditory Cognition and Human Performance: Research and Applications. Boca Raton, FL: CRC Press - Taylor and Francis Group.

Baldwin, C. L., Eisert, J. L., Garcia, A., Lewis, B., Pratt, S. M., & Gonzalez, C. (2012). Multimodal urgency coding: Auditory, visual, and tactile parmeters and their impact on perceived urgency. Work, 41, 3586-3591. doi: 10.3233/WOR-2012-0669-3586

Baldwin, C. L., & May, J. F. (2011). Loudness interacts with semantics in auditory warnings to impact rear-end collisions. Transportation Research Part F: Traffic Psychology and Behaviour, 14(1), 36-42. doi: 10.1016/j.trf.2010.09.004

Baldwin, C. L., & Penaranda, B. N. (2012). Adaptive training using an artificial neural network and EEG metrics for within- and cross-task workload classification. NeuroImage, 59(1), 48-56. doi: 10.1016/j.neuroimage.2011.07.047

Falcone, B., Coffman, B. A., Clark, V. P., & Parasuraman, R. (2012). Transcranial direct current stimulation enhances perceptual sensitivity and 24-hour retention in a complex threat detection task. PLoS One, 7(4), e34993. doi: 10.1371/journal.pone.0034993.

Fu, S., Fedota, J., Greenwood, P. M., & Parasuraman, R. (2012). Attentional load is not a critical factor for eliciting C1 attentional effect – A reply to Rauss, Pourtois, Vuilleumier, and Schwartz. Biological Psychology, dx.doi.org/10.1016/j.biopsycho.2012.03.012.

Greenwood, P. M., Parasuraman, R., & Espeseth, T. (2012). A cognitive phenotype for the nicotinic receptor gene CHRNA4 rs1044396. Neuroscience and Biobehavioral Reviews, 36, 1331-1341.

Krueger, F., Parasuraman, R., Iyengar, V., Thornburg, M., Weel, J., Lin, M., Clarke, E., McCabe, K., & Lipsky, R. (2012). Oxytocin receptor genetic variation promotes trust behavior. Frontiers in Human Neuroscience, 6, doi: 10.3389/fnhum.2012.00004.

Matthews, G., Warm, J.S., Reinerman-Jones, L., Langheim, L.K., Guznov, S., Shaw, T.H., Finomore, V.S. (2011). The Functional Fidelity of Individual Differences Research: The Case for Context-Matching, Theoretical Issues in ergonomic Science, 12, 435-450.

Parasuraman, R. (2011). Neuroergonomics: Brain, cognition, and performance at work. Current Directions in Psychological Science, 20, 181-186.

Parasuraman, R., Baldwin, C. L., Knott, B., Warm, J. S., Finomore, V., Boehm-Davis, D., & Galster, S. M. (2012). Neuroergonomics, technology, and cognition. Work: A Journal of Prevention, Assessment and Rehabilitation, 41, 5167-5171.

Saqer, H., Visser, E., Strohl, J., & Parasuraman, R. (2012). Distractions N' Driving: Video game simulation educates young drivers on the dangers of texting while driving. Work: A Journal of Prevention, Assessment and Rehabilitation, 41, 5877-5879.

Shaw, T.H., Finomore, V.S., Warm, J.S., Matthews, G. (2012). Effects of regular or irregular event schedules on Cerebral Hemovelocity during a sustained attention task. Journal of Clinical and Experimental Neuropsychology, 34, 57-66.

de Visser, E. & Krueger, F. (in press). Interpersonal trust as a dynamic belief? In F. Krueger & J. Grafman (Eds.), The Neural Basis of Human Belief Systems. Hove, England: Psychology Press.

Wang, Y., Fu, S., Greenwood, P., Luo, Y., &

Publications, Presentations, Applications & Awards

Parasuraman, R. (2012). Perceptual load, voluntary attention, and aging: an event related potential study. International Journal of Psychophysiology, 84, 17-25.

Presentation / Posters

Azarian, S., Peterson, M. S., Green, T. (October 2012). Where's the threat? Angry postures reflexively cue anxious individuals.. Neuroscience 2012.

Baldwin, C.L., Kidd, D., Roberts, D., & Nelson, E. (2012). Negative Transfer in Auditory In-vehicle Collision Warning Systems. 18th World Congress of Ergonomics - IEA 2012. Recife, Brazil.

Boehm-Davis, D. A. (2012, February). Can you control your bias? Subliminal actions of the brain that can affect your case work. Lecture presented at the American Academy of Forensic Science Meeting. Atlanta, GA. Also presented (2012, April). At the Chesapeake Bay Division of the International Association for Identification Meeting, Cambridge, MD.

Buzzell, G., Baldwin, C., Roberts, D., Barrow, J., & McDonald, C. (2012) Navigational Style and Electrophysiological Correlates of Conflict in an Auditory Spatial Stroop Task. Annual Meeting of the Cognitive Neuroscience Society. Chicago, Illinois

Buzzell, G.A., Baldwin, C.L., Wegner, L.A., Roberts, D., Barrow, J.H., & McDonald, C.G. (2011). Electrophysiological Indices of Conflict in an Auditory Spatial Stroop Task. Society for Neuroscience Annual Meeting. Washington, DC.

Caywood, M.S., Greenwald, H.S., Roberts, D.M., Colombe, J.B., & Weiland, M.Z. (2011). EEG correlates of dynamic workload in en-route air traffic control. Society for Neuroscience Annual Meeting. Washington, DC.

Dziura, S., Baccus, W., and Thompson, J. (2012). The effect of stimulus contrast on action discrimination. Poster session presented at the annual meeting of the Vision Sciences Society, Naples, FL.

Eisert, J. L., and Baldwin, C. L. (2012). Vibrotactile Signals Effectivly Convey Collision Avoidance Information With Less Annoyance. Proceeding of the Intelligent Transportation Society of America Annual Meeting. (May, 2012, Washington, DC).

Eisert, J., Gartenberg, D., Thornton, R., & Youmans, R. (2012). Optimal interface location and limits of gesture proficiency in an automobile. In Proceedings of 56th annual meeting of the Human Factors and Ergonomics Society.

Finomore, V., Funke, G., Shaw, T., Satterfield, K., Castle, C., Sitz, A., & Funke, M. (2012). Effects of the Multi-Modal Communication tool on Communication and Change Detection for Command & Control Operators. Proceedings of the Human Factors and Ergonomic Society, 56.

Funke, G., Dillard, M., Funke, M., Warm, R., & Parasuraman, R. (2012, February). The SART does not promote mindlessness in vigilance. Paper presented in the Symposium on Neuroergonomics, Technology, and Cognition, International Ergonomics Association Conference, Recife, Brazil.

Fedota, J., McDonald, C., & Parasuraman, R. (2012, March). Contextual task difficulty modulates stimulus discrimination: Electrophysiological evidence for interaction between sensory and executive processes. Paper presented the Annual Meeting of the Cognitive Neuroscience Society, Chicago, IL.

Gartenberg, D. (2012). Is QS science? The role of QS in scientific discovery. In Proceedings of the 2nd Quantified Self Conference 2012, Palo Alto, CA.

Gartenberg, D., De Visser, E., & Strohl, J. (2012). Turning scientific concerns into strengths for quantified self experimentation. Guest editorial for the Quantified Self.

Publications, Presentations, Applications & Awards

Gartenberg, D. I., Breslow, L., McCurry, J. M. Trafton, J. G. (2012). Time pressure, memory, and task knowledge facilitate the opportunism heuristic in dynamic tasks. In Proceedings of the 56th annual meeting of the Human Factors and Ergonomics Society.

Gartenberg, D., Pfannenstiel, D., Ghazanfari, P., & Yaktieen, A. (2012). Proactive Life: Building apps that improve health and decision making. Showcase on Behavioral and Health Interventions Conference, George Mason University, Fairfax, VA; February 27, 2012.

Gartenberg, D., Forest, G., & Therrien, M. (2012). A smartphone PVT application is successfully used to identify one's sleep schedule associated with better daytime alertness. In Proceedings of the 26th annual meeting of the Associated Professional Sleep Societies.

Gonzalez, C., Benson, W., Pratt, S. M., Figueroa, I., Rhodes, D., Youmans, R. (in press). Creating a computerized assessment of cognitive flexibility with a user-friendly participant and experimenter interface. Proceedings of the Human Factors and Ergonomics Society 56thAnnual Meeting. Boston, Massachusetts.

Kennedy, W.G. & Patterson, R.E. (2012) Modeling Intuitive Decision Making in ACT-R. In N. RuBwinkel, U. Drewitz, & H. van Rijn (Eds.) Proceedings of the 11th International Conference on Cognitive Modeling (ICCM 2012), pp 1-6. Berlin. (12-15 April 2012)

Kennedy, W.G., Ritter, F.E, Lebiere, C., Juvina, I., Oltramari, A., Gratch, J. and Young, R.M. (2012) ICCM Symposium on Cognitive Modeling of Processes "Beyond Rational". In N. RuBwinkel, U. Drewitz, & H. van Rijn (Eds.) Proceedings of the 11th International Conference on Cognitive Modeling (ICCM 2012), pp 55-58. Berlin. (12-15 April 2012)

Maren Strenziok, Michael Chung, Sophia Santacruz,Pamela Greenwood, Raja Parasuraman: Altered Dorsolateral Prefrontal Cortex Activation During Attentionally-Guided Spatial Working Memory Processing in Young Adults; Cognitive Neuroscience Society Meeting, Chicago, IL; April 2, 2012

Maren Strenziok, Ellen Clarke, Ryan McGarry, James Bicksel, James Thompson, Pamela Greenwood, Raja Parasuraman: Cerebral White Matter Integrity and Everyday Problem Solving Changes after Cognitive Training with Video Games in Healthy Old Age; Showcase on Behavioral and Health Interventions Conference, George Mason University, Fairfax, VA; February 27, 2012.

Parasuraman, R. (2012, February). Neurogenetics of individual differences in complex decision making. Paper presented in the Symposium on Neuroergonomics, Technology, and Cognition, International Ergonomics Association Conference, Recife, Brazil.

Pratt, S. M., Lewis, B., Penaranda, B. N., Roberts, D., Gonzalez, C., & Baldwin C. L. (2012, in press). Perceived Urgency Scaling in Tactile Alerts. Proceedings of the 56th Human Factors & Ergonomics Society Conference. Boston, MA, October 2012.

Saqer, H., de Visser, E., Strohl, J., & Parasuraman, R. (2012, February). Distractions N' Driving: Video game simulation to educate young drivers on the dangers of distracted driving. Poster session presented at IEA 2012: 18th World Congress on Ergonomics, Recife, Brazil.

Saqer, H., Kidwell, B., &Youmans, Robert, R. J. (in press). Expanding the Usability Toolkit: UsingPowerPoint™ to Perform Website Analysis and Testing. Proceedings of the Human Factors and Ergonomics Society 56thAnnual Meeting. Boston, Massachusetts.

Publications, Presentations, Applications & Awards

Satterfield, K., Ramirez, R., Shaw, T., & Parasuraman, R. (2012). Measuring workload during a dynamic supervisory contrl task using cerebral blood flow velocity and the NASA-TLX. Proceedings of the Human Factors and Ergonomics Society, USA, 56.

Satterfield, K., Shaw, T., Ramirez, R. & Kemp, E (2012). A neuroergonomic evaluation of cognitive workload transitions in a supervisory control task using Transcranial Doppler Sonography. In W. Karwowski & G. Salvendy (Eds). Applied Human Factors and Ergonomics. Boca-Raton: Taylor Francis.

Safford, A., Siembieda, K.A., & Thompson, J.C. (2012). Object-based attentional modulation of effective connectivity in biological motion perception. Cognitive Neuroscience Society, Chicago, IL.

Shaw, T. H., Satterfield, K, Finomore V., & Ramirez, R. (2012). A comparison of subjective and physiological workload assessment techniques during a 3-dimensional audio vigilance task. Proceedings of the Human Factors and Ergonomics Society, USA, 56.

Smith, M.A.B., Blumberg, E.J., & Peterson, M.S. (2012) The Impact of Gestalt Grouping on Objects in Spatial Working Memory. Poster. 2012 Vision Sciences Society Conference.

Smith, M.A.B. & Sims, V.K. (2011) The Effect of a Human-teacher vs a Robot-teacher on Human Learning: A Pilot Study. Poster. 2012 Association for Psychological Science Conference.

Therrien, M., Hebert, M., Gartenberg, D., De Koninck, J., & Forest, G (2012). High correlation and predictive value between alertness measured by reaction time and physical performance. In Proceedings of the 26th annual meeting of the Associated Professional Sleep Societies.

de Visser, E., Krueger, F., McKnight, P. Steven Scheid, Stephanie Chalk, Melissa Smith &Parasuraman, R., (in press). The world is not enough: Trust in cognitive agents. In Proceedings of thethe 56th Annual Meeting of the Human Factors and Ergonomics Society, Boston, MA.

de Visser., E (2012, September). QS+1: Lessons learned from assisting in trading FOREX currencies. In Proceedings of the 2nd Quantified Self Conference 2012, Palo Alto, CA.

Werner, N. E., Nelson, E. T. & Boehm-Davis, D. A. Human factors methods to reduce medication error: Using task analysis in a pediatric and adult pharmacy. Presented at the 18th World Congress on Ergonomics,

Applications

Gartenberg, D. iPhone Application. “Sleep Diary Alarm Clock.” Spring 2011.

Awards

Bridget Lewis, Haneen Saqer, Jonathan Strohl, Melissa Smith, Jesse Eisert, Christian Gonzalez, and Ewart de Visser. Governor’s Transportation Safety Award from the Commonwealth of Virginia. The Distractions n’ Driving group.

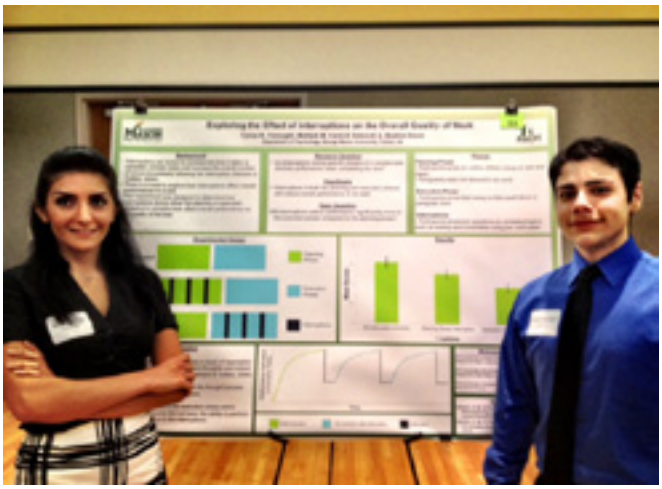
Wendy Baccus. 2012 APA-USNC International Travel and Mentoring Award Recipient ($1500) to attend the 30th International Congress of Psychology (ICP2012) in Cape Town, South Africa.

Raja Parasuraman. 2012: Outstanding Educator Award, International Ergonomics Association Triennial Award

Matt Peterson. Grant on: “Electroencephalography (EEG) Feedback In Rapid Decision-Making”, US Army Research Office: Network Sciences: Decision & Neuro-Sciences

Melissa Smith. Recipient of the 2012 Outstanding Graduate Teaching Assistant Award.

More Semester Highlights!



The ArchLab inspired various undergraduate research projects that were featured at the undergraduate showcase. In this photo, two undergrads are presenting research they conducted with Professor Boehm-Davis' lab.

Ryan, Brian, Raja, and Will jamming out at the end of the year barbeque.

Your contributions help us continue to improve the Psychology program at George Mason University. If you would like to make a financial contribution, visit http://supportingmason.gmu.edu. Be sure to specify either Psychology Department or Psychology Scholarships! Thank you for your generosity.

For information about Alumni Affairs go to: http://www.gmu.edu/alumni. Be sure to keep your information up to date.