

# *Curriculum Vitae*

## **Carl F. Smith, M.A.**

Human Factors and Applied Cognition Program - Department of Psychology  
George Mason University  
4400 University Drive, MS 3F5, Fairfax, Virginia 22030-4444  
Office (571) 236-2489 Fax (703) 993-1330  
E-mail: [csmithg@gmu.edu](mailto:csmithg@gmu.edu)

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## **EDUCATION**

PhD. - George Mason University, Human Factors and Applied Cognitive Psychology, expected August 2007

M.A. - George Mason University, M.A., Human Factors and Applied Cognitive Psychology, August 2002 – May 2004

B.S. - Old Dominion University, Psychology, August 1999 - May 2002

## **PROFESSIONAL EXPERIENCE**

Graduate Research Assistant, George Mason University, Fairfax, VA. May 2002 – 2007

Contractor, UserCentric, Oakbrook Terrace, IL. June –August 2006

User Experience Design Intern, Motorola, Chicago, IL. May 2005 – August 2005

Undergraduate Research Assistant, Old Dominion University, Norfolk, VA. May 2000-May 2002

## **RESEARCH INTERESTS**

My research interests center generally on the effect of information presentation on learning and performance. Specifically, I am interested in the ability of visual images to augment expert behavior in complex systems. Additionally, I am interested in the creation and application of various user centered analysis and design methodologies, especially in the extension of currently existing techniques to address novel human factors issues. Other interests include knowledge elicitation, the design and execution of training for complex systems, and computational cognitive models.

Carl F. Smith, M.A. ([csmithg@gmu.edu](mailto:csmithg@gmu.edu))

## MANUSCRIPTS IN PREPARATION

Smith, C.F., Boehm-Davis, D.A., Fadden, S. (in preparation). The use of functional displays to improve pilot performance.

Smith, C.F. and Boehm-Davis (in preparation). The effect of functional display use on novice performance and knowledge acquisition.

## PROCEEDINGS

Prada, L.R., Boehm-Davis, D. A., Riley, V. & Smith, C.F. (2007) Designing, evaluating, and training flight decks of the future. *Proceedings of the 14th International Symposium on Aviation Psychology*. Dayton, OH.

Smith, C.F. (2006). *Designing an Intelligent Wi-Fi Mobile Device Interface with Work Domain Analysis*. In Proceedings of the 50<sup>th</sup> Annual HFES Meeting, October 19, 2006.

Smith, C.F., Fadden, S., and Boehm-Davis, D.A. (2005). *Use of a functional avionics display under varying workload conditions*. In Proceedings of the 49th Annual HFES Meeting, September 25, 2005.

Smith, C. F., & Boehm-Davis, D. A. (2005). *Improving Novice Flight Performance Using a Functional Flight Display*. Proceedings of the International Symposium on Aviation Psychology 13th Annual Meeting, Oklahoma City, OK.

Smith, C.F., Boehm-Davis, D.A., and Chong, R.S. (2004). *The Effect of Functional Information in an Avionics Display*. In Proceedings of the 48th Annual HFES Meeting, September 24, 2004.

## TECHNICAL AND NON-PEER REVIEWED PUBLICATIONS

Horvath, D.J., Smith, C.F., & Squire, P.N. (2007). From student to employee: What's HFES got to do with it? *HFES Bulletin*, 50 (7). Human Factors and Ergonomics Society, San Diego, CA, USA.

Barrow, J., Durkee, K., Moore, J., Smith, C.F., & Squire, P.N. (2007). Runway Incursion Monitoring, Detection and Altering System (RIMDAS): A Proposed Solution for Preventing Runway Incursions. Unpublished manuscript submitted in consideration of the 2007 FAA Airport Design Competition for Universities.

- Smith, C.F., Prada, L.R. & Rahman, M.T. (2006). Designing a multimodal automotive interface. Unpublished manuscript submitted in consideration of the International Award in Design, Engineering and Innovation in the Field of Human Factors.
- Smith, C.F., Prada, L.R., & Rahman, M.T. (2005) Driving design: Creating simple interfaces for complex cars. *User Experience*, 4(1), 14-19.
- Smith, Carl F., Mikulka, P.J., Scerbo, M., and Freeman, F.F. (2002). *The effect of event rate on the vigilance decrement*. Honors Thesis. Old Dominion University, Norfolk, VA, USA.

## PRESENTATIONS

- Smith, C.F., Squire, P.N., Durkee, K., Barrow, J., & Moore, J. (2007). *RIMDAS: A direct warning system for runway incursions*. Presented at the 79th Annual AAAE Conference and Exposition. June 12<sup>th</sup>, 2007. Washington, D.C.
- Prada, L.R., Boehm-Davis, D. A., Riley, V. & Smith, C.F. (2007) *Designing, evaluating, and training flight decks of the future*. Presented at the 14th International Symposium on Aviation Psychology. April 24<sup>th</sup>, 2007. Dayton, OH.
- Smith, C.F., and Boehm-Davis, D.A.(2007). *Assessing novice pilot knowledge using a Functional Display*. Presented at the 2007 APA Annual Meeting, March 2, 2007, Fairfax, VA.
- Smith, C.F. (2006) Internships: Building a Bridge from Classrooms to Careers. *Presentation given at the 50<sup>th</sup> Annual Meeting of the Human Factors and Ergonomics Society*. October 16, 2006. San Francisco, CA.
- Smith, C.F., & Prada, L.R. (2006). Transforming driving: Designing an automotive concept for a student competition. Presented at George Mason University Arch Lab Lecture Series, April 26, 2006. Fairfax, VA.
- Smith, C.F., and Boehm-Davis, D.A.(2005). *Improving knowledge with a functional display*. Presented at the APA 113<sup>th</sup> Annual Convention, August 19<sup>th</sup>, 2005, Washington D.C..
- Smith, C.F., and Boehm-Davis, D.A.(2005). *Improving Novice Knowledge with a Functional Aviation Display*. Presented at the 2005 APA Division 19/21 Mid-Year Meeting, March 4, 2005, Fairfax, VA.
- Smith, C.F., and Boehm-Davis, D.A.(2004). *The Effect of Functional Information in an Avionics Display*. Presented at the 2004 APA Division 19/21 Mid-Year Meeting, March 5, 2004, Ft Belvoir, VA.

## POSTERS

- Barrow, J., Morrow, J., Durkee, K., Smith, C.F., Squire, P.N. (2007). *Runway Incursion Monitoring, Detection and Altering System (RIMDAS): A Proposed Solution for Preventing Runway Incursions*. Poster presented at GMU Innovations 2007, Fairfax, VA, April 25, 2007.
- Smith, C.F. (2006). *Using Task Analysis to Inform Storyboarding: Leveraging Tasks in the Design Space*. Poster Presented at World Usability Day New England 2006, Putney, VT. November 14, 2006.
- Smith, Carl F., Mikulka, P.J., Scerbo, M., and Freeman, F.F. (2002) *The effect of event rate on the vigilance decrement*. [Poster] Presented at 46<sup>th</sup> Annual HFES Meeting, September 25, 2002

## AWARDS/FUNDING

- Functional Display Use Improves Novice Knowledge. HFES Training Technical Group Best Student Paper Award. - \$250 (September 2007).
- Runway Incursion Monitoring, Detection and Altering System (RIMDAS): A Proposed Solution for Preventing Runway Incursions. GMU Innovations 2007 -Most Effective Corporate/Community Interaction Award - \$200 (April 2007)
- Use of a Functional Display as a Flight Training Device: Assessment of Knowledge Acquisition and Transfer of Training. George Mason University Liberal Arts and Humanities Graduate Fellowship - Dissertation Award - \$8422.50 (Jan 2007).
- George Mason University Graduate Student Travel Award. - \$1000 (Sept 2002-Sept 2006).
- Use of a Functional Display as a Flight Training Device: Assessment of Knowledge Acquisition and Transfer of Training. HFES Training Technical Group Student Award - \$750. (September 2006)
- Designing an Intelligent Wi-Fi Mobile Device Interface with Work Domain Analysis. HFES Communications Technical Group Student Paper Award - \$250. (September 2006)
- Designing a multimodal automotive interface. International Award in Design, Engineering and Innovation in the Field of Human Factors - Ex Aequo Award. 2500 Euro. (May 2006)  
Smith, C.F., Prada, L.P., Rahman, M.T.
- The effect of event rate on the vigilance decrement. Alan L. Chaikin Psychology Honors Thesis Award. \$200. (May 2002)

The effect of event rate on the vigilance decrement. Virginia Space Grant Consortium.  
Undergraduate Research Award - \$3,000 over 1 year. (June 2001- May 2002)

## **PROFESSIONAL AFFILIATIONS**

Human Factors and Ergonomics Society (HFES) (2002-Present)

Human Factors and Ergonomics Society (HFES) Aerospace Systems Technical Group (ASTG)  
(2003-Present)

Human Factors and Ergonomics Society (HFES) Human Performance Modeling Technical  
Group (HPM-TG) (2003-Present)

Human Factors and Ergonomics Society (HFES) Cognitive Engineering Decision Making  
Technical Group (CEDM-TG) (2005-Present)

Human Factors and Ergonomics Society (HFES) Communications Technical Group (C-TG)  
(2005-Present)

Human Factors and Ergonomics Society (HFES) Product Design Technical Group (PD-TG)  
(2006-Present)

Human Factors and Ergonomics Society GMU Student Chapter (HFES) (2002-2007)

Association for Computing Machinery – Special Interest Group Computer Human Interaction  
(SIG-CHI) (2003-Present)

Association for Computing Machinery –Special Interest Group Computer Human Interaction -  
GMU Student Chapter (SIG-CHI – GMU) (2003-Present)

Usability Professionals Association (UPA) (2004-Present)

## **PROFESSIONAL SERVICE**

Human Factors and Ergonomics Society (HFES) Aerospace Systems Technical Group (ASTG)  
Newsletter Editor (2004-2007)

Human Factors and Ergonomics Society GMU Student Chapter (HFES) President (2003-2006)

Association for Computing Machinery –Special Interest Group Computer Human Interaction -  
GMU Student Chapter (SIG-CHI – GMU) Vice President (2003-2006)

APA Division 19/21 Mid-Year Meeting Volunteer (2004-2006)

Cognitive Science Annual Conference Volunteer (2002-2004)

## **Media Appearances**

ATO Online (2007). Winners of first aviation safety design contest announced. Retrieved from <https://employees.faa.gov/org/linebusiness/ato/news/story/?newsId=45140>

Grief, J. (2007). Mason psychology students win FAA competition for runway safety project. Retrieved on June 13th, 2007, from <http://gazette.gmu.edu/articles/10375/>

Grief, J. (2007). George Mason University psychology students win FAA award for runway safety design. Retrieved on June 11th, 2007, from <http://condor.gmu.edu/newsroom/display.phtml?rid=615>

Packard, E. (2007) Post-grad growth area: Engineering psychology. *gradPSYCH: The Magazine of the American Psychological Association of Graduate Students*. Retrieved on March 7, 2007, from <http://gradpsych.apags.org/mar07/engineering.html>

Mora, E. (2007) A winning display. *George Mason University Broadside Online*. Retrieved March 20, 2007, from <http://www.broadsideonline.com/02-05-2007/News/mora.htm>

Italdesign (2006). *Italdesign International Award in Design, Engineering, and Innovation in the field of Automotive Human Factors promoted jointly by...* Retrieved April 24, 2007, from <http://www.italdesign.it/dinamic/pressandvideo/article.php?id=51>

## **REVIEWED FOR**

Proceedings of HFES Annual Meetings (2004-2007)

Ad Hoc Reviewer for International Journal of Human-Computer Studies (2005)

## **UNDERGRADUATES SUPERVISED**

Steven Beretzky – Directed Research. (2005)

Katherine E. Newman – Directed Research (2005)

Michael Levesque – Directed Research (2006)

Kimberly Day – Directed Research (2006)

Carl F. Smith, M.A. ([csmithq@gmu.edu](mailto:csmithq@gmu.edu))

Salvatore Lance – Directed Research (2007)

Meghan Brosseau – Directed Research (2007)

Kathleen Edwards - Directed Research (2007)

Justin Whitlock - Directed Research (2007)

David Shain - Directed Research (2007)

Daniel Brooks - Directed Research (2007)

Stephanie Sktuzak – Directed Research (2007)