

Andrew Hebrank

Center for BrainHealth  
University of Texas at Dallas  
Dallas, TX 75235

7010 Lindsley Ave  
Dallas, TX 75223

Phone: (214) 810-1236  
Fax: (972) 883-3250  
Email: ahebrank@utdallas.edu

Education: Carleton College, Northfield MN  
Major: Psychology  
Minor: Cognitive Studies  
Degree: BA Summa Cum Laude, 2003  
Honors: Phi Beta Kappa Society  
Psi Chi Society  
David R. Noyes Prize  
National Merit Scholar

Research Interests

Development of cortical network connectivity and change in these networks across the lifespan.

Developmental psychopathologies, including autism and fragile X syndrome.

Non-human animal cognition and the relationship between affect and cognition during development.

Professional Experience

2007 - Present Center for BrainHealth, University of Texas at Dallas (Dallas, TX). Research manager and technical support for lifespan cognitive neuroscience studies.  
2003 - 2007 Beckman Institute, University of Illinois (Urbana, IL). fMRI and behavioral research on effects of aging and culture on cognition.  
2000 - 2003 Carleton College (Northfield, MN). Publication design and production (2002-03). Resident assistant (2000-02).  
2002 WildWatch Thailand (Kanchanaburi, Thailand). Helped implement new marketing strategies. Surveyed new tour routes in national parks.  
1999 - 2002 Kontek Systems (Durham, NC). Performed audio-visual installations for various commercial, medical, and education clients.

Publications

Leshikar, ED, Gutchess, AH, Hebrank, AC, Sutton, BP, Park, DC. (2009). The impact of increased relational encoding demands on frontal and hippocampal function in older adults. *Cortex*; a journal devoted to the study of the nervous system and behavior.

- Sutton, BP, Goh, J, Hebrank, A, Welsh, RC, Chee, MW, Park, DC. (2008). Investigation and validation of intersite fMRI studies using the same imaging hardware. *Journal of magnetic resonance imaging : JMRI*, 28: 21-28.
- Goh, JO, Chee, MW, Tan, JC, Venkatraman, V, Hebrank, A, Leshikar, ED, Jenkins, L, Sutton, BP, Gutchess, AH, Park, DC. (2007). Age and culture modulate object processing and object-scene binding in the ventral visual area. *Cognitive, affective & behavioral neuroscience*, 7: 44-52.
- Gutchess, AH, Hebrank, A, Sutton, BP, Leshikar, E, Chee, MW, Tan, JC, Goh, JO, Park, DC. (2007). Contextual interference in recognition memory with age. *NeuroImage*, 35: 1338-47.
- Chee, M., Goh, J., Venkatraman, V., Tan, J.C. Gutchess, A., Sutton, B., Hebrank, A., Leshikar, E., & Park, D.C. (2006). Age related changes in object processing and contextual binding revealed using fMR adaptation. *Journal of Cognitive Neuroscience*, 18, 495-507.
- Payer, D., Marshuetz, C., Sutton, B., Hebrank, A., Welsh, R. C., & Park, D. C. (2006). Decreased specialization in old adults on a working memory task. *Neuroreport*, 17, 487-491.
- Goh, J., Siong, S., Park, D., Gutchess, A., Hebrank, A. & Chee, M. (2004). Cortical areas involved in object, background, and object-background processing revealed with functional magnetic resonance adaptation. *Journal of Neuroscience*, 24: 10223-10228.

### Presentations

- Modulation of neural response to task difficulty in young and old adults using fMRI. (E. Leshikar, A. Gutchess, A. Hebrank, B. Sutton, R. C. Welsh, & D. C. Park, Cognitive Neuroscience Society 2006)
- Aging and culture modulate fMR-Adaptation in the ventral visual area. (J. Goh, M. Chee, J. C. Tan, V. Venkatraman, E. Leshikar, A. Hebrank, L. Jenkins, B. Sutton, D. Park, Cognitive Neuroscience Society 2006)
- Age differences in neural activation patterns in frontal, parietal and ventral visual cortex. L. Jenkins, A. Hebrank, S. Laszlo, T. Polk & D. C. Park, Cognitive Neuroscience Society 2006)
- fMR adaptation shows that age and culture modulate visual processing of complex pictures. (M.W.L.Chee, J.O.S. Goh, J. Tan, A. Gutchess, B. Sutton, A. Hebrank, E. Leshikar, D.Park, Society for Neuroscience 2005)
- Prefrontal compensation with age for contextual interference. (A. Gutchess, A. Hebrank, B. Sutton, E. Leshikar, M. Chee, J. Tan, J. Goh, D. Park, Society for Neuroscience 2005)
- Age-Related Decline in Ventral-Visual Specificity in a Working Memory Task (D. Payer & A. Hebrank, Cognitive Science Society 2004).
- Temporal Binding, Dynamic Interaction, and the Biological Study of Consciousness (A. Hebrank, Carleton College 2003).

### Professional Projects

- Participant Database (2008). Designed and implemented a custom secure database and interface for tracking participants' contact information, appointments, testing data, and payments. Integrates with external utilities calendaring and cognitive testing programs.

Surveyor Psychological Testing Tool (2004). Computer-based administration of questionnaires. Questionnaires are coded in HTML-like code and results are collected in customizable database format.

Egg Remover Data Transfer System (2003) for Embrex Inc. and Wood Hatchery (Liverpool, UK). Designed and implemented a data transfer protocol to collect fertility statistics from poultry hatchery equipment.

Pigeon Response Collection System (2002) for Carleton College. Implemented a pigeon response collection/reinforcement system for a BRS-LVE operant conditioning chamber, with a Java GUI for 8051 controller.

Cognitive Studies Web Site (2002) for Carleton College. Created website for Cognitive Studies program.

Infectious Disease Online Modeling (1998) for Shodor Education Foundation. Implemented a variety of online demonstrations of modeling applications in Perl and Java.

### Special Training and Skills

Programming: Real-world experience with a variety of programming languages on Windows and Unix platforms, including C/C++/C#, Java, PHP, Perl, Pascal, Matlab, Python. Extensive web programming experience (LAMP), and Javascript client/server web applications (AJAX).

Network Administration: Responsible for upkeep of lab mail, NFS, SMB, print, and HTTP servers and hardware for internal data network.

Low-Voltage Electrical Work: Experience with cable termination, soldering, component modification, equipment installation, and other aspects of A/V installation. Also familiarity with residential and commercial construction and renovation.

FMRI data analysis: Experience with 4-dimensional image processing, including SPM and multivariate analyses. Development of utilities and batching functions for open source analysis platforms.

Design: Experience with design, photography, and image editing. Familiarity with Adobe Illustrator and Photoshop.