Curriculum Vitae

Derek Evan Nee
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Education

Post-Doctoral Fellow (July, 2008 – Present)
Indiana University, Bloomington
Department of Psychological and Brain Sciences

Post-Doctoral Fellow (July, 2008 – June, 2011)
University of Michigan, Ann Arbor
Department of Psychology

Ph.D. (August, 2008)
Psychology: Cognition and Perception
University of Michigan, Ann Arbor, MI

Intensive Course in Transcranial Magnetic Stimulation (October, 2004)
Harvard University, Boston MA

B.A. (March, 2003)
Dartmouth College, Hanover, NH (Cognitive Science and Computer Science)

Awards and Honors

Outstanding Graduate Student Instructor Award (2007)

National Science Foundation Graduate Fellowship (2005)

National Defense Science and Engineering Graduate Fellowship (2005)

American Psychological Foundation and Council of Graduate Departments of Psychology Graduate Research Scholarship in Experimental Psychology (2004)

Clyde H. Coombs Scholarship in Mathematical Psychology (2003)

Peer-Reviewed Publications

Berman, M.G., Peltier, S., **Nee, D.E.**, Kross, E., Deldin, P.J., & Jonides, J. (in press). Depression, rumination, and the default network. *Social, Cognitive, and Affective Neuroscience.*

Berman, M.G., **Nee, D.E.**, Casement, M., Kim, H.S., Deldin, P., Kross, E., Gonzalez, R., Demiralp, E., Gotlib, I.H., Hamilton, P., Joormann, J., Waugh, C., & Jonides, J. (2011). Neural and behavioral effects of interference resolution in depression and rumination. *Cognitive, Affective, and Behavioral Neuroscience*, 11(1), 85-96.

Nee, D.E. & Jonides, J. (2011). Dissociable contributions of prefrontal cortex and the hippocampus to short-term memory: Evidence for a 3-state model of memory. *NeuroImage*, 54, 1540-1548.

Nee, D.E., Kastner, S., & Brown, J.W. (2011). Functional heterogeneity of conflict, error, task-switching, and unexpectedness effects within medial prefrontal cortex. *NeuroImage*, 54, 528-540.

Joormann, J., **Nee, D.E.**, Berman, M.G., Jonides, J., & Gotlib, I.H. (2010). Interference resolution in major depression. *Cognitive, Affective, and Behavioral Neuroscience*, 10(1), 21-33.

Xu, L., Johnson, T.D., Nichols, T.E., & **Nee, D.E.** (2009). Modeling inter-subject variability in fMRI activation location: A Bayesian hierarchical spatial model. *Biometrics*, 65(4), 1041-1051.

Bissett, P.G., **Nee, D.E.**, & Jonides, J. (2009). Dissociating interference-control processes between memory and response. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 35(5), 1306-1316.

Nee, D.E. & Jonides, J. (2009). Common and distinct neural correlates of perceptual and memorial selection. *NeuroImage*, 45, 963-975.

Nee, D.E. & Jonides, J. (2008). Neural correlates of access to short-term memory. *Proceedings of the National Academy of Sciences of the United States of America*, 105, 14228-14233.

Nee, D.E., & Jonides, J. (2008). Dissociable interference-control processes in perception and memory. *Psychological Science*, 19, 490-500.

Nee, D.E., Jonides, J., & Berman, M.G. (2007). Neural mechanisms of proactive interference-resolution. *NeuroImage*, 38, 740-751.

Nee, D.E., Jonides, J., & Wager, T.D. (2007). A meta-analysis of neuroimaging activations from interference-resolution tasks. *Cognitive, Affective, & Behavioral Neuroscience*, 7(1), 1-17.

Wager, T.D., Sylvester, C.Y., Lacey, S., **Nee, D.E.**, Franklin, M., & Jonides, J. (2005). Common and unique components of inhibition revealed by fMRI. *NeuroImage*, 27, 323-340.

Reviews, Commentaries, & Book Chapters

Brown, J.W. & **Nee, D.E.** (in press) Executive control of cognitive search. *Cognitive Search: Evolution, Algorithms, and the Brain.*

Lustig, C.A., Lewis, R.L., Berman, M.G., **Nee, D.E.**, Moore, K.S., & Jonides, J. (2009). Psychological and neural mechanisms of short-term memory. In J.T. Cacioppo & G. G. Berntson (Eds.), *Handbook of Neuroscience for the Behavioral Sciences*. New York: John Wiley and Sons.

Barch, D.M., Berman, M.G., Engle, R., Jones, J.H., Jonides, J., Macdonald, A. 3rd., **Nee. D.E.**, Redick, T.S., Sponheim, S.R. (2009). CNTRICS final task selection: working memory. *Schizophrenia Bulletin*, 35(1), 136-152.

Nee, D.E., Berman, M.G., Moore, K.S., & Jonides, J. (2008). Neuroscientific evidence on the distinction between short- and long-term memory. *Current Directions in Psychological Science,* 17, 102-106.

Jonides, J., Lewis, R.L., **Nee, D.E.**, Lustig, C.A., Berman, M.G., & Moore, K.S. (2008). The mind and brain of short-term memory. *Annual Review of Psychology*, 59, 193-224.

Berman, M.G., Jonides, J., & **Nee, D.E.** (2006). Studying the mind and brain with fMRI. *Social, Cognitive, & Affective Neuroscience*, 1, 158-161.

Jonides, J., **Nee, D.E.**, & Berman, M.G. (2006). What has functional imaging told us about the mind? So many examples, so little space. *Cortex*, 42, 414-417.

Jonides, J. & **Nee, D.E.** (2006). Brain mechanisms of proactive interference in working memory. *Neuroscience*, 139, 181-193.

Jonides, J. & **Nee, D.E.** (2005). Assessing dysfunction using refined cognitive methods. *Schizophrenia Bulletin*, 31, 823-829.

Jonides, J., Lacey, S., & **Nee, D.E.** (2005). Processes of working memory in mind and brain. *Current Directions in Psychological Science*, 14, 2-5.

Jonides, J. & **Nee, D.E.** (2004). Resolving conflict in mind and brain. *Psychological Science Agenda*, 18(5).

Manuscripts in Preparation

Nee, D.E. & Brown, J.W. (under review). Dissociable frontal-striatal and frontal-parietal networks involved in updating hierarchical contexts in working memory.

Nee, D.E., Brown, J.W., Askren, M.K., Krawitz, A., Demiralp, E., & Jonides, J. (in preparation). A meta-analysis of executive working memory.

Nee, D.E. & Jonides, J. (in preparation). Attentionally-mediated visual suppression produces object-specific inhibition.

Jahn, A., **Nee, D.E.**, & Brown, J.W. (in preparation). The neural basis of predicting outcomes of planned actions.

Nee, D.E. & Brown, J.W. (in preparation). Neural correlates of task-set representation in working memory.

Invited Lectures

Nee, D.E. (2010). Neural Basis of Working Memory: Goal Maintenance and Interference Control. Presented at the third meeting of Cognitive Neuroscience Treatment Research to Improve Cognition in Schizophrenia (CNTRICS): Imaging Biomarkers, University of California, Davis.

Nee, D.E. (2008). *Neural Mechanisms of Access to Short-term Memory*. Presented at the Michigan fMRI Symposium, University of Michigan.

Abstracts and Presentations

Nee, D.E. & Brown, J.W. (2011). *Dissociable Frontal-Striatal and Frontal-Parietal Networks Involved in Updating Goals and Sub-Goals in Working Memory*. Poster to be presented at the 2011 meeting of Society for Neuroscience; Washington, D.C., November 2011.

Nee, D.E., Kastner, S., & Brown, J.W. (2011). *Neural Evidence for a Retrieval-Based Model of Conflict Adaptation*. Poster presented at the 2011 meeting of Cognitive Neuroscience Society; San Francisco, CA, April 2011.

Nee, D.E., & Jonides, J. (2010). *Short-term Memory: Distinguishing the Region of Direct Access from the Activated Portion of Long-term Memory.* Poster

presented at the 2010 meeting of Cognitive Neuroscience Society; Montreal, Canada, April 2010.

Berman, M.G., Peltier, S., **Nee, D.E.**, Kross, E., Deldin, P., & Jonides J. (2010). *Depression, Rumination, and the Default Network*. Poster presented at the 2010 meeting of Cognitive Neuroscience Society; Montreal, Canada, April 2010.

Nee, D.E., Kastner, S., & Brown, J.W. (2009). *Functional Heterogeneity of Conflict, Error, and Task-Switching Effects within Medial Prefrontal Cortex*. Poster presented at the 2009 meeting of Society for Neuroscience; Chicago, IL, October, 2009.

Nee, D.E., & Brown, J.W. (2009). *Shared Control Mechanisms of Conflict Adaptation and Switching in the Intra-Parietal Sulcus*. Poster presented at the 2009 meeting of Cognitive Neuroscience Society; San Francisco, CA, April 2009.

Berman, M.G., **Nee, D.E.**, Deldin, P., Casement, M., Kim, H.S., Jaeggi, S., Buschkuehl, M., Behnke, C., Bissett, P., & Jonides, J. (2009). *A Chronometric Analysis of Cognition in Depression*. Poster presented at the 2009 meeting of Cognitive Neuroscience Society; San Francisco, CA, April 2009.

Nee, D.E. (2008). *Neural Mechanisms of Short-term Memory*. Presented at the Pat Gurin Lecture Award Series, University of Michigan.

Nee, D.E., & Jonides, J. (2008). *Attentionally-Mediated Visual Suppression Produces Object-Specific Inhibition*. Poster presented at the 2008 meeting of Society for Neuroscience; Washington, D.C., November, 2008.

Nee, D.E., & Jonides, J. (2008). *Neural Mechanisms of Retrieval from Short-Term Memory.* Poster presented at the 2008 meeting of Cognitive Neuroscience Society; San Francisco, CA, April 2008.

Nee, D.E., & Jonides, J. (2007). *Dissociable Neural Mechanisms of Interference-Resolution: Perception and Memory*. Poster presented at the 2007 meeting of Cognitive Neuroscience Society; New York, NY, May 2007.

Bissett, P., **Nee, D.E.**, Jonides, J. (2006). *Interference Mechanisms for Response Production and Memory Representations.* Poster presented at the 2006 meeting of Psychonomic Society; Houston, Texas, November, 2006.

Nee, D.E., Berman, M.G., & Jonides, J. (2006). *The Role of the Left Inferior Frontal Gyrus in Resolving Proactive Interference as Revealed by fMRI*. Poster presented at the 2006 meeting of Cognitive Neuroscience Society; San Francisco, CA, April 2006.

Berman, M.G., **Nee, D.E.**, & Jonides, J. (2005). *Fatiguing Executive Function*. Poster presented at the 2005 meeting of Psychonomic Society; Toronto, Canada, November, 2005.

Nee, D.E., Jonides, J., Sylvester, C.Y.C., Christiansen, J., Thomas, A., & Salthouse, T.A. (2005). *Age Differences in Brain Activation in the Trail Making Task*. Poster presented at the 2005 meeting of Cognitive Neuroscience Society; New York NY, April 2005.

Nee, D.E., & Jonides, J. (2004). *Dissociating Information-Suppression During Encoding Versus Working Memory*. Poster presented at the 2004 meeting of Psychonomic Society; Minneapolis, MN, November 2004.

Wager, T.D., Sylvester, C.Y.C., Lacey, S.C., **Nee, D.E.**, Franklin, M., & Jonides, J. (2004). *Common and unique components in resolving response conflict revealed by fMRI*. Poster presented at the Annual Meeting of the Organization for Human Brain Mapping, June 2004.

Nee, D.E., Jonides, J., & Wager, T.D. (2004). *A Meta-Analysis of Interference-Resolution Tasks.* Poster presented at the 2004 meeting of Cognitive Neuroscience Society; San Francisco CA, April 2004.

Nee, D.E., Jonides, J., & Wager, T.D. (2003). *A Meta-Analysis of Inhibitory Function*. Poster presented at Kyoto-Michigan Conference; Ann Arbor MI, December 2003.

Teaching Experience

Instructor
Psychology 808 – Introduction to fMRI (Summer 2004-2007)
Psychology 808 – Introduction to Experiment Programming (Summer 2005)

Graduate Student Instructor
Psychology 111 – Introduction to Psychology (Winter 2005)
Psychology 240 – Introduction to Cognitive Psychology (Fall 2005, Winter 2006)

Undergraduate Research Opportunity Program
Mentored Patrick Bissett

Professional Memberships

Cognitive Neuroscience Society
Society for Neuroscience

Professional Service

Ad-hoc Reviewer:
Proceedings of the National Academy of Sciences
Psychological Science
Journal of Neuroscience
Cerebral Cortex
Journal of Neurophysiology
NeuroImage
Journal of Cognitive Neuroscience
Human Brain Mapping
Frontiers in Human Neuroscience
Cortex
Neuropsychologia
Cognition
Cognitive, Affective, & Behavioral Neuroscience
Social, Cognitive, & Affective Neuroscience
Cognition & Emotion
International Journal of Psychology
Journal of Experimental Psychology: Human Perception and Performance,
Journal of Experimental Psychology: Learning, Memory, & Cognition
Journal of Experimental Psychology: General

Research

My research focuses on working memory and cognitive control primarily through the use of functional magnetic resonance imaging (fMRI). I seek to understand the fundamental architecture and representations that underlie working memory by drawing predictions from the latest cognitive models of working memory and testing them with fMRI. I also investigate interference control processes that protect working memory, as well as processes that use working memory to inform appropriate responding.