

# Curriculum Vitae

**Deanna Marie Barch**

## PERSONAL

Mailing Address: Department of Psychology  
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## EDUCATION

1983-1987 B.A., Psychology  
Northwestern University, Evanston, Illinois

1988-1991 M.A., Clinical Psychology,  
Champaign, Illinois  
University of Illinois at Urbana-Champaign,

1991-1993 Ph.D., Clinical Psychology  
Champaign, Illinois  
University of Illinois at Urbana-Champaign,

1993-1994 Internship in Clinical Psychology  
Clinic, University of Pittsburgh Medical School  
Pennsylvania  
Western Psychiatric Institute and  
Pittsburgh,

1994-1997 Postdoctoral Fellowship, NIH Training Fellowship  
Clinic, University of Pittsburgh Medical School  
Pennsylvania  
Western Psychiatric Institute and  
Pittsburgh,

## ACADEMIC POSITIONS

1997-1998 Assistant Professor of Psychiatry  
Western Psychiatric Institute and Clinic, University of Pittsburgh Medical School,  
Pittsburgh, Pennsylvania

1998-2003 Assistant Professor Psychology

Washington University, St. Louis, Missouri

2003-2008 Associate Professor Psychology, Psychiatry, and Radiology  
Washington University, St. Louis, Missouri

2005-2006 Visiting Fellow, Center for Advanced Studies (Clare Hall)  
University of Cambridge, Cambridge England

2008-Present Professor of Psychology, Psychiatry, and Radiology  
Washington University, St. Louis, Missouri

### **AWARDS AND HONORS**

1983-1987 National Merit Scholarship

1990 The Honor Society of Phi Kappa Phi

1992 Graduate College Dissertation Research Grant, University of Illinois at Urbana-Champaign

1992 Ed Scheiderer Memorial Research Award, Outstanding Clinical/Community Psychology Research Project, University of Illinois at Urbana-Champaign

1997 Young Investigators Award, International Congress on Schizophrenia Research

1997 Outstanding Dissertation Award, Society for the Science of Clinical Psychology

1999-2000 Outstanding Faculty Mentor Award, Graduate Student Senate, Washington University

American Psychological Association Distinguished, Scientific Award for Early Career Contribution to Psychology in the area of Psychopathology

2002 The Joseph Zubin Memorial Fund Award

Artsci Council Faculty Award, Washington University

Special Recognition, Outstanding Faculty Mentor Award, Graduate Student Senate, Washington University

2007 NAMI St. Louis Outstanding Scientist Award

### **FELLOWSHIPS**

1986 Benton J. Underwood Summer Research Fellowship, Northwestern University

1988-1989 University Fellowship, University of Illinois at Urbana-Champaign

1989 Summer University Fellowship, University of Illinois at Urbana-Champaign

1994-1996 National Institute of Mental Health Post-Doctoral Fellowship

1994-1997 Clinical Research Training for Psychologists Postdoctoral Fellowship, Western Psychiatric Institute and Clinic, University of Pittsburgh Medical School

## **RESEARCH GRANTS AND FELLOWSHIPS**

### **Current and Past**

National Alliance for Research on Schizophrenia and Depression Working memory contributions to language deficits in schizophrenia PI: Deanna M. Barch Total Direct Costs: \$60,000	1995-1997
Center for the Neuroscience of Mental Disorders (P50 MH45156, Pilot Project) CNS catecholamines and cognitive dysfunction in schizophrenia PI: Cameron S. Carter; Co-I: Deanna M. Barch Total Direct Costs: \$10,000	1995-1995
National Institutes of Health (R01 MH47073) Mechanisms of context processing in schizophrenia PI: Jonathan D. Cohen, Co-I: Deanna M. Barch Total Direct Costs: \$1,006,978	1997-2002
National Institutes of Health (P50 MH45156) Cortical circuitry and cognition in schizophrenia Project PI: Jonathan D. Cohen, Major Collaborator: Deanna M. Barch Total Direct Project Costs: \$938,747	1998-2003
Pharmacia and Upjohn PNU-101387G: Randomized double-blind parallel group, placebo controlled 14-day study on working memory in healthy male volunteers PI: Deanna M. Barch Total Direct Costs: \$150,000	1998-1999
Pharmacia and Upjohn PNU-101387G: Randomized double-blind parallel group, placebo controlled 14-day study on working memory in healthy elderly volunteers PI: Deanna M. Barch Total Direct Costs: \$150,000	1998-1999

<p>The McDonnell Center for Higher Brain Function  Development, validation, and application of novel event-related  FMRI methods toward studies of higher brain function  PI: Randy L. Buckner, Co-Investigator: Deanna M. Barch</p>	<p>1998-2001</p>
<p>National Institutes of Health (R03 MH60887)  Working and long-term memory deficits in schizophrenia  PI: Deanna M. Barch  Total Direct Costs: \$100,000</p>	<p>1999-2000</p>
<p>National Institutes of Aging (R03 AG18138)  A computational model of cognitive control deficits in  healthy aging: Behavioral and neuroimaging investigations  PI: Todd S. Braver, Co-PI Deanna M. Barch  Total Direct Costs: \$50,000</p>	<p>2000-2001</p>
<p>National Institutes of Aging (P50 AG05681 Pilot Project)  Cognitive control in early stage Alzheimer's disease  PI: Todd S. Braver, Major Collaborator: Deanna M. Barch  Total Direct Costs: \$26,500</p>	<p>2000-2001</p>
<p>National Alliance for Research on Schizophrenia and Depression  Novel cognitive and neuroimaging approaches to assessing  risk for schizophrenia  PI: Deanna M. Barch  Total Direct Costs: \$60,000</p>	<p>2000-2002</p>
<p>Dana Clinical Hypotheses Program in Imaging  Prefrontal cortex dysfunction as a risk factor for the  development of schizophrenia  PI: Deanna M. Barch  Total Direct Costs: \$100,000</p>	<p>2000-2003</p>
<p>National Institutes of Health (R01 MH60697)  Treatment outcomes in vascular depression  PI: Yvette Sheline, Co-Investigator: Deanna M. Barch</p>	<p>2001-2006</p>
<p>National Institutes of Health (P20 MH62130)  Structure function and cognition in schizophrenia (Project 2  In Conte Feasibility Center)  PI: Deanna M. Barch  Total Direct Project Costs: \$196,740</p>	<p>2001-2004</p>
<p>McDonnell Center for Higher Brain Function  Neural substrates of decision-making</p>	<p>2002-2004</p>

PI: Len Green, Co-Investigator: Deanna M. Barch  
Total Direct Costs: \$1,050,000

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|---|-----------|
| National Alliance for Research on Schizophrenia and Depression<br>Human reward system alternations in major depression<br>PI: Yvette I. Sheline, Co-Investigator: Deanna M. Barch<br>Total Direct Costs: \$60,000   | 2003-2005 |
| National Institutes of Health (R01 MH64821)<br>fMRI studies of emotional circuitry in depression<br>PI: Yvette I. Sheline, Co-Investigator: Deanna M. Barch<br>Total Direct Costs: \$975,000  | 2003-2008 |
| National Institutes of Health (R01 MH066031)<br>Schizophrenia, prefrontal cortex, and emotional regulation<br>PI: Deanna M. Barch<br>Total Direct Costs: \$900,000  | 2004-2008 |
| National Institutes of Health (P20 MH62130)<br>Structure function and cognition in schizophrenia (Project 2<br>In Conte Center for the Neuroscience of Mental Disorders)<br>PI: Deanna M. Barch<br>Total Direct Project Costs: \$825,000                      | 2004-2009 |
| National Alliance for Research on Schizophrenia and Depression<br>Young Investigators Award<br>Error Prediction Mechanisms in Schizophrenia<br>PI: Josh Brown, Mentor: Deanna M. Barch<br>Total Direct Costs: \$60,000  | 2004-2006 |
| National Institutes of Health (R13)<br>Brain – Based Measures for Treatment Development of Impaired Cognition in<br>Schizophrenia<br>PI: Cameron Carter, CO-PI: Deanna Barch<br>Total Direct Costs: \$250,000   | 2006-2008 |
| National Institutes of Health Contract<br>Treatment Units Research Network<br>PI: Steve Marder, Chief Neuropsychologist: Deanna Barch<br>Total Direct Costs: \$3,000,000  | 2005-2009 |
| National Alliance for Research on Schizophrenia and Depression<br>Established Investigators Award<br>Developmental Disturbances in the Neural Systems Supporting<br>Working Memory As Endophenotypic Markers of Risk for Schizophrenia<br>PI: Deanna M. Barch | 2006-2008 |

Total Direct Costs: \$100,000

- McDonnell Center for Higher Brain Function 2006-2008  
Strategy Influences on Brain Function in Aging  
PI: Deanna Barch  
Total Direct Costs: \$80,000
- National Alliance for Research on Schizophrenia and Depression 2007-2009  
Young Investigators Award  
Proactive Control in Generalized Anxiety Disorder  
PI: Christina Fales, Mentor: Deanna M. Barch  
Total Direct Costs: \$60,000
- National Institutes of Health (R01 MH056584-09) 2007-2012  
Neuromorphometry in Schizophrenia by Computer Algorithm  
PI: John G. Csernansky, Co-Investigator: Deanna M. Barch  
Total Direct Costs: \$1,250,000
- Communities Healing Adolescent Depression and Suicide 2008-2010  
Neural Changes Associated With Treatment in Preschool Onset Depression  
PI: Joan Luby, Co-PI: Deanna M. Barch  
Total Direct Costs: \$100,000
- National Institutes of Health (R01 MH62130) 2008-2011  
Cognitive Neuroscience Task Reliability & Clinical Applications Consortium  
PI: Deanna M. Barch  
Total Direct Project Costs: \$525,000
- National Institutes of Health (R01 MH64821-6) 2008-2013  
FMRI studies of emotional circuitry in depression  
PI: Yvette I. Sheline, Co-Investigator: Deanna M. Barch  
Total Direct Costs: \$1,250,000
- National Institutes of Health (R01 MH083837) Pending  
Functional and Structural Imaging in Children with Preschool Onset Depression  
Co-PIs: Joan Luby, Deanna M. Barch, & Kelly Botteron  
Total Direct Project Costs: \$2,500,000
- National Institutes of Health (R01 MH066031-5 (Renewal) Pending  
Schizophrenia, prefrontal cortex, and emotional regulation  
PI: Deanna M. Barch  
Total Direct Costs: \$2,300,000

**JOURNAL ARTICLES (peer reviewed)**

- Albright, J. S., Alloy, L. B., Barch, D. M., & Dykman, B. (1993). Social comparison by dysphoric and nondysphoric college students: The grass isn't always greener on the other side. *Cognitive Therapy and Research, 17*, 485-509.
- Barch, D. M., & Berenbaum, H. (1994). The relationship between information processing and language production. *Journal of Abnormal Psychology, 103*, 241-250.
- Stolar, N., Berenbaum, H., Banich, M., & Barch, D. M. (1994). Neuropsychological correlates of alogia and affective flattening in schizophrenia. *Biological Psychiatry, 35*, 164-172.
- Berenbaum, H. & Barch, D. M. (1995). The categorization of thought disorder. *Journal of Psycholinguistic Research, 24*, 349-376.
- Barch, D. M. & Berenbaum, H. (1996). Language production and thought disorder in schizophrenia. *Journal of Abnormal Psychology, 105*, 81-88.
- Barch, D. M., Cohen, J. D., Servan-Schreiber, D., Steingard, S., Steinhauer, S., & van Kammen, D. (1996). Semantic priming in schizophrenia: An examination of spreading activation using word pronunciation and multiple SOAs. *Journal of Abnormal Psychology, 105*, 592-601.
- Barch, D. M., & Berenbaum, H. (1997). Language generation in schizophrenia and mania. *Journal of Psycholinguistic Research, 26*, 410-412.
- Barch, D. M., & Berenbaum, H. (1997). The effect of language production manipulations on negative thought disorder and discourse coherence disturbances in schizophrenia. *Psychiatry Research, 71*, 115-127.
- Barch, D. M., Braver, T. S., Nystrom, L. E., Forman, S. D., Noll, D. C., & Cohen, J. D. (1997). Dissociating working memory from task difficulty in human prefrontal cortex. *Neuropsychologia, 35*, 1373-1380.
- Carter, C. S., Braver, T. S., Barch, D. M., Botvinick, M. M., Noll, D. C., & Cohen, J. D. (1998). Anterior cingulate cortex, error detection, and the on-line monitoring of performance. *Science, 280*, 747-749.
- Barch, D. M., & Carter, C. S. (1998). Selective attention in schizophrenia: Relationship to verbal working memory. *Schizophrenia Research, 33*, 53-61.
- Perlstein, W., Carter, C. S., Barch, D. M., & Baird, J. (1998). A comparison of the card and single trial Stroop task versions in schizophrenia patients. *Neuropsychology, 12*, 414-425.
- Barch, D. M., Carter, C. S., Perlstein, W., Baird, J., Cohen, J. D. & Schooler, N. (1999) Increased Stroop facilitation effects in schizophrenia are not due to increased automatic spreading activation. *Schizophrenia Research, 39*, 51-64

- Braver, T. S., Barch, D. M., & Cohen, J. D. (1999). Cognition and control in schizophrenia: A computational model of dopamine and prefrontal function. *Biological Psychiatry*, *46*, 312-328.
- Cohen, J. D., Barch, D. M., Carter, C. S., & Servan-Schreiber, D. (1999). Schizophrenic deficits in the processing of context: Converging evidence from three theoretically motivated cognitive tasks. *Journal of Abnormal Psychology*, *108*, 120-133.
- Kerns, J. G., Berenbaum, H., Barch, D. M., Banich, M., & Stolar, N. (1999). Word production in schizophrenia and its relationship to positive symptoms. *Psychiatry Research*, *87*, 29-37.
- Barch, D. M., Carter, C. S., Braver, T. S., Sabb, F. W., Noll, D. C., & Cohen, J. D. (1999). Overt verbal responding during fMRI scanning: Empirical investigations of problems and potential solutions. *Neuroimage*, *10*, 642-657.
- Barch, D. M., Carter, C. S., Hachten, P. C., & Cohen, J. D. (1999). The "benefits" of distractibility: The mechanisms underlying increased Stroop effects in schizophrenia. *Schizophrenia Bulletin*, *24*, 749-762.
- Barch, D. M., Sabb, F. W., Braver, T. S., & Noll, D. C. (2000). The anterior cingulate cortex and response competition: Evidence from an fMRI study of overt verb generation. *Journal of Cognitive Neuroscience*, *12*, 298-305.
- Barch, D. M., Braver, T. S., Akbudak, E., Conturo, T. E., & Snyder, A. Z. (2001). Anterior cingulate cortex and response conflict: Common activations across response modalities and processing domains. *Cerebral Cortex*, *11*, 837-848.
- Barch, D. M., Carter, C. S., Braver, T. S., MacDonald, A., Sabb, F. W., Noll, D. C., & Cohen, J. D. (2001). Selective deficits in prefrontal cortex function in medication naïve patients with schizophrenia. *Archives of General Psychiatry*, *58*, 280-288.
- Botvinick, M. M., Braver, T. S., Carter, C. S., Barch, D. M., & Cohen, J. D. (2001). Conflict monitoring and cognitive control. *Psychological Review*, *108*, 624-652.
- Braver, T. S., Barch, D. M., Gray, J. M., Molfese, D. L., & Snyder, A. Z. (2001). Anterior cingulate cortex and response conflict: Effects of frequency, inhibition, and errors. *Cerebral Cortex*, *11*, 825-836.
- Braver, T. S., Barch, D. M., Kelley, W. M., Buckner, R. L., Cohen, N. J., Miezin, F. M., Snyder, A. Z., Ollinger, J. M., Akbudak, E., Conturo, T. E., & Peterson, S. E. (2001). Direct comparison of prefrontal cortex regions engaged by working memory and episodic encoding. *Neuroimage*, *14*, 48-59.
- Braver, T. S., Barch, D. M., Keys, B. A., Carter, C. S., Cohen, J. D., Kaye, J. A., Janowsky, J. S., Taylor, S. F., Yesavage, J. A., Mumenthaler, M. S., Jagust, W. J., & Reed, B. R. (2001). Context processing in older adults: Evidence for a theory relating cognitive control to

neurobiology in healthy aging. *Journal of Experimental Psychology: General*, 130, 746-763.

- Sheline, Y. I., Barch, D. M., Donnelly, J. M., Ollinger, J. M., & Mintun, M. A. (2001). Amygdala hyperarousal to masked emotional faces in depressed subjects resolves with antidepressant treatment: An fMRI study. *Biological Psychiatry*, 50, 651-658.
- Barch, D. M., Csernansky, J. G., Conturo, T., & Snyder, A. Z. (2002). Working and long-term memory deficits in schizophrenia: Is there a common underlying prefrontal mechanism? *Journal of Abnormal Psychology*, 111, 478-494.
- Braver, T. S. & Barch, D. M. (2002). A theory of cognitive control, aging cognition and neuromodulation. *Neuroscience and Biobehavioral Reviews*, 26, 809-817.
- Burbridge, J. & Barch, D. M. (2002). Affective influences on reference production in schizophrenia. *Journal of Abnormal Psychology*, 111, 186-191.
- Barch, D. M., Carter, C. S., MacDonald, A., Braver, T. S., & Cohen, J. D. (2003). Context processing deficits in schizophrenia: Diagnostic specificity, four-week course, and relationships to clinical symptoms. *Journal of Abnormal Psychology*, 112, 132-143.
- Barch, D. M., Sheline, Y. I., Csernansky, J. G., & Snyder, A. Z. (2003). Working memory and prefrontal cortex dysfunction: Specificity to schizophrenia as compared to major depression. *Biological Psychiatry*, 53, 376-384.
- Bagner, D., Melinder, M. R. D., & Barch, D. M. (2003). Working memory and language comprehension in schizophrenia. *Schizophrenia Research*, 60, 299-309.
- Barch, D. M., Mathews, J. R., Buckner, R. L., Maccotta, L., Csernansky, J. G., Snyder, A. Z. (2003). Hemodynamic responses in visual, motor and somatosensory cortices in schizophrenia. *Neuroimage*, 20, 1884-1893.
- Melinder, M. R. D. & Barch, D. M. (2003). Working memory manipulations of language production in schizophrenia. *Schizophrenia Bulletin*, 29, 473-484.
- Barch, D. M., Carter, C. S., & Cohen, J. D. (2004). Factors influencing Stroop performance in schizophrenia. *Neuropsychology*, 18, 477-484.
- Barch, D. M. (2004). Pharmacological manipulations of human working memory. *Psychopharmacology*, 174, 126-135.
- Barch, D. M., Mitropoulou, V., Harvey, P., New, A. S., Silverman, J. M., and Siever, L. J. (2004). Context processing deficits in schizotypal personality disorder. *Journal of Abnormal Psychology*, 113, 556-568.
- Forman, S. D., Dougherty, G. G., Casey, B. J., Siegle, G. J., Braver, T. S., Barch, D. M., Stenger,

- V. A., Wick-Hull, C., Pizarow, L. A., & Lorensen, E. (2004). Opiate addicts lack error-dependent activation of rostral anterior cingulate. *Biological Psychiatry*, *55*, 531-537.
- Green, M. F., Nuechterlein, K. H., Gold, J. M., Barch, D. M., Cohen, J. D., Essock, S., Fenton, W. S., Frese, F., Goldberg, T. E., Heaton, R. K., Keefe, R. S. E., Kern, R. S., Kraemer, H., Stover, E., Weinberger, D. R., Zalcman, S., and Marder, S. R. (2004). Approaching a consensus cognitive battery for clinical trials in schizophrenia: The NIMH-MATRICES conference to select cognitive domains and test criteria. *Biological Psychiatry*, *56*, 301-307.
- Hershey, T., Black, K. J., Hartlein, J., Barch, D. M., Braver, T. S., Carl, J. L., & Perlmuter, J. S. (2004). Cognitive-pharmacologic fMRI in Tourette syndrome: A pilot study. *Biological Psychiatry*, *55*, 916-925.
- Hershey, T., Black, K. J., Hartlein, J., Braver, T. S., Barch, D. M., Carl, J. L., & Perlmuter, J. S. (2004). Dopaminergic modulation of response inhibition: An fMRI study. *Cognitive Brain Research*, *20*, 438-448.
- Mathews, J. R. & Barch, D. M. (2004). Assessing emotional processing in patients with schizophrenia using episodic memory for emotional and non-emotional words. *Emotion and Cognition*, *18*, 721-740.
- Nuechterlein, K. H., Barch, D. M., Gold, J. M., Goldberg, T. E., Green, M. F., & Heaton, R. K. (2004). Identification of separable cognitive factors in schizophrenia. *Schizophrenia Research*, *72*, 29-39.
- Barch, D. M. (2005). The relationships between cognition, motivation and emotion in schizophrenia: How much and how little we know. *Schizophrenia Bulletin*, *31*, 875-881.
- Barch, D. M. and Carter, C. S. (2005). Amphetamine improves cognitive function in medicated individuals with schizophrenia and healthy controls. *Schizophrenia Research*, *77*, 43-58.
- Braver, T.S., Satpute, A. B., Keys, B. A., Racine, C. A., and Barch, D. M. (2005). Context processing and context maintenance in healthy aging and early-stage dementia of the Alzheimer's type. *Psychology of Aging*, *20*, 33-46.
- Bonner-Jackson, A., Haut, K. Csernansky, J. G., & Barch, D. M. (2005). The effect of strategic processing at encoding on episodic memory and cortical activity in schizophrenia. *Biological Psychiatry*, *58*, 47-55.
- Burbridge, J., Larsen, R., & Barch, D. M. (2005). Affective reactivity of language: The role of psychophysiological arousal. *Emotion*, *5*, 145-153.
- Fox, M. D., Snyder, A. Z., Barch, D. M., Gusnard, D. A., Raichle, M. E. (2005). Transient BOLD responses at block transitions. *Neuroimage*, *28*, 956-966.
- Fox, M. D., Snyder, A. Z., McAvoy, M. P., Barch, D. M., Raichle, M. E. (2005). The BOLD

onset transient: Identification of novel functional differences in schizophrenia. *Neuroimage*, 25, 771-782.

Holmes, A. J., MacDonald, III, Carter, C. S., Barch, D. M., Stenger, V. A., & Cohen, J. D. (2005). Prefrontal functioning during context processing in schizophrenia and depression: An event-related fMRI study. *Schizophrenia Research*, 76, 199-206.

MacDonald, A., Carter, C. S., Kerns, J. Ursu, S., Barch, D. M., Holmes, A., Stenger, V. A., & Cohen, J. D. (2005). Specificity of hypofrontality and context processing deficits to schizophrenia: A comparison among unmedicated first-episode samples. *American Journal of Psychiatry*, 162, 475-484.

Melinder, M. R. D. and Barch, D. M. (2005). Easier tasks can have better discriminating power: The case of verbal fluency. *Journal of Abnormal Psychology*, 114, 383-391.

Yarkoni, T., Gray, J. R., Chrsatil, E. R., Barch, D. M., Green, L., & Braver, T. S. (2005). Transient and sustained neural activity during temporally extended decision making. *Cognitive Brain Research*, 23, 71-84.

Andrews, J., Wang, L., Csernansky, J. G., & Barch, D. M. (2006). The relationship between structure, function and cognition in the thalamus in schizophrenia. *American Journal of Psychiatry*, 163, 463-469.

Barch, D. M. (2006). What can research on schizophrenia tell us about the cognitive neuroscience of working memory? *Neuroscience*, 139, 73-84.

Brahmbhatt, S., Haut, K., Csernansky, J. G., & Barch, D. M. (2006). Neural correlates of verbal and nonverbal working memory deficits in individuals with schizophrenia and their high-risk siblings. *Schizophrenia Research*, 87, 191-204.

Delawalla, Z., Barch, D. M., Eastup, J., Thomason, E., Hanewinkle, M., Thompson, P. A. & Csernansky, J. G. (2006). Common and unique factors mediating deficits in cognitive function and clinical symptoms among siblings of individuals with schizophrenia. *Schizophrenia Bulletin*, 32, 525-537.

Haut, K. M. & Barch, D. M. (2006). Sex influences on material-sensitive functional activation in working and episodic memory: Men and women are not all that different. *Neuroimage*. 32, 411-422.

Mathews, J. R. & Barch, D. M. (2006). Episodic memory for emotional and non-emotional words in individuals with anhedonia. *Psychiatry Research*, 143, 121-133.

Paxton, J. L., Barch, D. M., Storandt, M., & Braver, T. S. (2006). Effects of environmental support and strategy training on older adults' use of context. *Psychology and Aging*, 21, 499-509.

- Rush, B. K., Barch, D. M., & Braver, T. S. (2006). Accounting for cognitive aging: Context processing, inhibition or processing speed? *Aging, Neuropsychology and Cognition*, *13*, 588-610.
- Racine, C., Barch, D. M., Noelle, D., & Braver, T. S. (2006). Changes in strategic processing with age as measured by a category learning paradigm. *Aging, Neuropsychology and Cognition*, *13*, 411-434.
- Sheline, Y. I., Barch, D. M., Welsh-Boehmer, K., Gersing, K., Garcia, K., Pieper, C., Kraemer, H.C., & Doraiswamy, P. M. (2006). Cognitive function in late life depression: Relationships to depression severity, cerebrovascular risk factors and processing speed. *American Journal of Psychiatry*, *60*, 58-65.
- Barch, D. M., & Csernansky, J. G. (2007). Abnormal parietal cortex activation during working memory in schizophrenia: Verbal phonological coding disturbances versus domain general executive dysfunction. *American Journal of Psychiatry*, *164*, 1090-1098.
- Barch, D. M. & Smith, E. E. (2008). The cognitive neuroscience of working memory: Relevance to CNTRICS and schizophrenia. *Biological Psychiatry*, *64*, 11-17.
- Bonner-Jackson, A., Haut, K. Csernansky, J. G., & Barch, D. M. (2007). Levels-of-processing effects in first-degree relatives of individuals with schizophrenia. *Biological Psychiatry*, *15*, 1141-1147.
- Burbridge, J. A., & Barch, D. M. (2007). Anhedonia and the subjective experience of emotion in schizophrenia. *Journal of Abnormal Psychology*, *116*, 30-42.
- Carter, C. S., & Barch, D. M. (2007). Cognitive neuroscience based approaches to measuring and improving treatment effects on cognition in schizophrenia: The CNTRICS initiative. *Schizophrenia Bulletin*, *33*, 1131-1137.
- Fair, D. A., Dosenbach, N. U. F., Church, J. A., Cohen, A. L., Brahmbhatt, S., Miezin, F. M., Barch, D. M., Raichle, M., Petersen, S. E., & Schlaggar, B. L. (2007). Development of distinct task control networks through segregation and integration. *Proceedings of the National Academy of Science*, *104*, 13507-12512.
- Harms, M. P., Wang, L., Mamah, D., Kim, J., Barch, D. M., Thompson, P., & Csernansky, J. G. (2007). Thalamic shape abnormalities in individuals with schizophrenia and their nonpsychotic siblings. *Journal of Neuroscience*, *27(50)*, 13835-13842.
- Mamah, D., Wang, L., Barch, D. M., de Erausquin, G. A., Thompson, P., Gado, M., & Csernansky, J. G. (2007). Structural analysis of the basal ganglia in schizophrenia. *Schizophrenia Research*, *89*, 59-71.
- McAuley, T. & Barch, D. M. (2007). Performance on an episodic encoding task yields further insight into functional brain development. *Neuroimage*, *34*, 815-826.

- McClure, M. M., Barch, D. M., Romero, M. J., Harvey, P.D., Siever, L. J. (2008). The effects of guanfacine on context processing abnormalities in schizotypal personality disorder. *Biological Psychiatry*, *61*, 1157-1160.
- Wang, L., Hosakere, M., Trein, J. C., Ratnanather, J. T., Barch, D. M., Thompson, P. A., Qui, A., Gado, M., Miller, M. I., Csernansky, J. G. (2007). Abnormalities of cingulate gyrus neuroanatomy in schizophrenia. *Schizophrenia Research*, *93*, 66-78.
- Anticevic, A., Dierker, D. L., Gillespie, S. K., Van Essen, D. C., Csernansky, J. G., & Barch, D. M. (2008). Surface-based analyses in functional neuroimaging: Focus on working memory in schizophrenia. *Neuroimage*, *41*, 835-848.
- Barch, D. M. (2008). Emotion, motivation and reward processing in schizophrenia spectrum disorders: What we know and where we need to go. *Schizophrenia Bulletin*, *34*, 816-818.
- Barch, D. M., Carter, C. S., Arnsten, A., Buchanan, R. W., Cohen, J. D., Geyer, M., Green, M. F., Krystal, J., Nuechterlein, K., Robbins, T., Silverstein, S., Smith, E. E., Strauss, M., Wykes, T., & Heinssen, R. (2008). Measurement Issues in the Use of Cognitive Neuroscience Tasks in Drug Development for Impaired Cognition in Schizophrenia: A Report of the Second Consensus Building Conference of the CNTRICS Initiative. *Schizophrenia Bulletin*, *34*, 613-618.
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- Carter, C. S. & Barch, D. M. (2008). An Overview of CNTRICS (Cognitive Neuroscience Approaches to Treatment Development for Impaired cognition in Schizophrenia) Meeting 1: Identifying Cognitive Mechanisms Targeted for Treatment Development in Schizophrenia. *Biological Psychiatry*, *64*, 4-10.
- Delawalla, Z., Barch, D. M., & Csernansky, J. C. (2008). Context processing and prefrontal function in non-psychotic siblings of individuals with schizophrenia. *Biological Psychiatry*, *63*, 490-497.
- Fair, D. A., Cohen, A. L., Dosenbach, N. U. F., Church, J. A., Miezin, F. M., Barch, D. M., Raichle, M. E., Petersen, S. E., & Schlaggar, B. L. (2008). The maturing architecture of the brain's default network. *Proceedings of the National Academy of Science*, *105*, 4028-4032.
- Fales, C. L., Barch, D. M., Rundle, M. M., Mintun, M. A., Snyder, A. Z., & Sheline, Y. I. (2008). Altered emotional interference processing in affective and cognitive-control brain

circuitry in major depression. *Biological Psychiatry*, 63, 377-384.

Fales, C. L., Barch, D. M., Burgess, G. C., Schaefer, A., Mennin, D. S., Braver, T. S., & Gray, J. R. (2008). Anxiety and cognitive efficiency: Differential modulation of transient and sustained neural activity during a working memory task. *Cognitive, Behavioral and Affective Neuroscience*, 8, 239-253.

Kerns, J. G., Nuechterlein, K. H., Braver, T. S., & Barch, D. M. (2008). Executive functioning component mechanisms and schizophrenia. *Biological Psychiatry*, 64, 26-33.

Mamah, D. Harms, M., Barch, D.M., & Csernansky, J. G. (2008). Basal ganglia shape abnormalities in the unaffected siblings of schizophrenia subjects. *Biological Psychiatry*, 64, 111-120.

McClure, M. M., Barch, D. M., Harvey, P. D., & Siever, L. J. (2008). Context processing in schizotypal personality disorder: evidence of specificity of impairment to the schizophrenia spectrum. *Journal of Abnormal Psychology*, 117, 342-354.

Nuechterlein, K. H., Green, M. F., Kern, R. S., Baade, L. E., Barch, D. M., Cohen, J. D., Essock, S., Fenton, W. S., Frese, F. J., Gold, J. M., Goldberg, T. , Heaton, R., Keefe, R. S. E., Kraemer, H., Mesholam-Gately, R., Seidman, L. J., Stover, E., Weinberger, D., Young, A. S., Zalcman, S., and Marder, S. (2008). The MATRICS Consensus Cognitive Battery: Part I: Test selection, reliability, and validity. *American Journal of Psychiatry*, 165, 203-213.

Paxton, J. L., Barch, D. M., Racine, C., & Braver, T.S. (2008). Cognitive control, goal maintenance and prefrontal function in healthy aging. *Cerebral Cortex*, 18, 1010-1028.

Sheline, Y. I., Vaishnavi, S. N., Mintun, M., Price, J. L., Wilkins, C. H., Snyder, A. Z., Barch, D. M., Couture, L., & McKinstry, R. (in press). Regional WMH burden in automated segmentation distinguishes late life depressed from controls matched for vascular risk factors. *American Journal of Psychiatry*, 165, 524-532.

Smith, M. J., Barch, D. M., Thompson, P. A., & Csernansky, J. G. (2008). Subclinical expression of schizophrenia-like symptoms in non-psychotic siblings of individuals with schizophrenia. *Schizophrenia Research*, 103, 324-325.

Barch, D.M., Yodkovik, N., Sypher-Locke, H., & Hanewinkel, M. (in press). Intrinsic motivation in schizophrenia: Relationships to cognitive function, depression, anxiety and personality. *Journal of Abnormal Psychology*.

Barch, D. M., Berman, M. G., Engle, R., Jones, J. H., Jonides, J., MacDonald, A., Nee, D. E., Redict, T. S., & Sponheim, S. R. (in press). CNTRICS Final task selection: Working memory. *Schizophrenia Bulletin*.

Barch, D. M., Braver, T. S., Carter, C. S., Poldrack, R. A., & Robbins, T. W. (in press).

CNTRICS Final task selection: Executive Control. *Schizophrenia Bulletin*.

Barch, D. M., Carter, C. S., Arnsten, A., Buchanan, R. W., Cohen, J. D., Geyer, M., Green, M. F., Krystal, J., Nuechterlein, K., Robbins, T., Silverstein, S., Smith, E. E., Strauss, M., Wykes, T., & Heinssen, R. Selecting paradigms from cognitive neuroscience for translation into use in clinical trials: Proceeding of the 3<sup>rd</sup> CNTRICS meeting. *Schizophrenia Bulletin*.

Bonner-Jackson, A., Csernansky, J. G., & Barch, D. M. (in press). Episodic memory in schizophrenia: The influence of strategy use on behavior and brain activation. *Psychiatry Research*.

Carter, C. S., Barch, D. M., Gur, R., Gur, R., Pinkham, A., & Ochsner, K. (in press). CNTRICS Final task selection: Social cognitive and affective neuroscience. *Schizophrenia Bulletin*.

Csernansky, J. G., Gillespie, S. K., Dierker, D. L., Anticevic, A., Wang, L., Barch, D. M., & Van Essen, D. C. (in press). Symmetric abnormalities in sulcal patterning in schizophrenia. *Neuroimage*.

Fales, C. L., Barch, D. M., Rundle, M., M., Mintun, M., A., Snyder, A. Z., Cohen, J. D., Mathews, J., & Sheline, Y. I. (in press). Antidepressant treatment reverses abnormalities in emotional interference processing in major depression. *Journal of Affective Disorders*.

MacDonald, A. W., Thermenos, H. W., Barch, D. M., & Seidman, L. J. (in press). Imaging genetic liability to schizophrenia: Systematic review of fMRI studies of patient's non-psychotic relatives. *Schizophrenia Bulletin*.

Smith, M. J., Barch, D. M., Csernansky, J. G. (in press). Bridging the gap between schizophrenia and psychotic mood disorders: Relating neurocognitive deficits to psychopathology. *Schizophrenia Research*.

Smith, M. J., Wolf, T., Barch, D. M., Manah, D., & Csernansky, J. G. (in press). Elevated rates of nicotine, alcohol, and cannabis use in the unaffected siblings of individuals with schizophrenia. *Schizophrenia Research*.

Wang, L., Mamah, D., Harms, M. P., Karnik, M., Price, J. L., Gado, M. H., Thompson, P. A., Barch, D. M., Miller, M. I. Csernansky, J. G. (in press). Progressive deformation of deep brain nuclei in schizophrenia. *Schizophrenia Research*.

## **MANUSCRIPTS UNDER REVIEW**

Anticevic, A., Repovs, G., Shulman, G. L., & Barch, D. M. (submitted). When less is more: Proactive TPJ Deactivation Protects Working Memory from Distraction.

Aspen, V. A., Cooperberg, J. Manwaring, J., Stein, R. I., Barch, D. M., Taylor, C. B., & Wilfley, D. E. (submitted). A preliminary study on selective processing of body image words in

women at-risk for developing an eating disorder: Can the modified Stroop be used as a measure of treatment outcome?

- Barch, D. M., Jacoby, L., Csernansky, J. G. (submitted). Episodic memory processing in schizophrenia: Impaired recollection in the context of enhanced familiarity.
- Brahmbhatt, S. B., White, D. A., & Barch, D. M. (submitted). Developmental differences in sustained and transient activity underlying working memory.
- Braver, T. S., Paxton, J. L., Locke, H. S., & Barch, D. M. (submitted). Flexible neural mechanisms of cognitive control within human prefrontal cortex.
- Chen, L., Rice, T. K., Thompson, P. A. Barch, D. M., & Csernansky, J. G. (submitted). Familial aggregation of clinical and neurocognitive domains in sibling pairs with and without schizophrenia.
- Harms, M. P., Wang, L., Campanella, C., Aldridge, K., Moffitt, A. J., Kuelper, J., Ratnanather, T., Miller, M. M., Barch, D. M., & Csernansky, J. G. (submitted). Structural abnormalities in specific gyri of prefrontal cortex in individuals with schizophrenia and their non-psychotic siblings.
- Leung, W. W., McClure, M. M., Siever, L. J., Barch, D. M., & Harvey, P. D. (submitted). Catechol-O-methyltransferase Val158Met Genotype in Healthy and Personality Disorder Individuals: Preliminary results from an examination of cognitive tests hypothetically differentially sensitive to dopamine function.
- Mathews, J. R. & Barch, D. M. (submitted). Subjective emotional experience, social cognition, and functional outcome in schizophrenia.
- Repovs, G., Csernansky, J. G., & Barch, D. M. (submitted). Functional connectivity in individuals with schizophrenia and controls during working memory task performance.
- Sheline, Y. I., Barch, D. M., Rundle, M., & Mintun, M. (submitted). When you are down your default system is up: Failure to deactivate default regions during emotional regulation in major depression.
- Swallow, K. M., Barch, D. M., Head, D., Speek, N. K., MMaley, C. J., Holder, D., & Zacks, J. M. (submitted). How people remember what they just saw changes when events change.
- Yarkoni, T., Conturo, T. E., Barch, D. M., & Braver, T. S. (submitted). Bold correlates of trial-by-trial response time variability in gray and white matter: a multi-study fMRI analysis.

## BOOK CHAPTERS AND BOOKS

- Carter, C. S. & Barch, D. M. (2000). Attention, memory and language disturbances in schizophrenia: clinical and pathophysiological implications. Andrade, C. (Ed): *Advances in Psychiatry*. New Delhi: Oxford University Press (pp. 45-72).
- Braver, T. S., Barch, D. M., & Cohen, J. D. (2002). The role of prefrontal cortex in normal and disordered cognitive control: A cognitive neuroscience perspective. In Stuss, D. T. & Knight, R. T. (Eds.) *Principles of Frontal Lobe Function*. Oxford University Press.
- Barch, D. M. & Buckner, R. L. (2003). Memory. In Fogel, B. S., Schiffer, R. B., & Rao, S. M. (Eds). *Neuropsychiatry, Second Edition*. Baltimore, MD: Lippincott, Williams & Wilkins.
- Barch, D. M. (2005). The cognitive neuroscience of schizophrenia. *Annual Review of Clinical Psychology*. 1. (pgs 321-353). Washington, DC. American Psychological Association.
- Drevets, C. W., Botteron, K., & Barch, D. M. (in press). Neuroimaging in psychiatry. In Rubing, G. (Ed). *Adult Psychiatry*. New York, NY: Blackwell Press.
- Barch, D. M., & Braver, T. S. (2007). Cognitive control in schizophrenia: Psychological and neural mechanisms. Engle, R. W., Sedek, G., von Hecker, U., & McIntosh, D. N. (Eds). *Cognitive Limitations in Aging and Psychopathology: Attention, Working Memory, and Executive Functions*
- Barch, D. M., & Belger, A. (in press). Cognitive neuroscience and functional imaging in schizophrenia. Charney, D. S., & Nestler, E. J (Eds). *Neurobiology of Mental Illness*. Oxford University Press.
- Barch, D. M. (in press). Behavioral processes in schizophrenia. Salzinger, K & Serper, M. (Eds). *Behavioral Mechanisms for Behavioral Disorders*. American Psychological Associate Press.

## REVIEWS AND COMMENTARIES

- Cohen, J. D., Dunbar, K. O., Barch, D. M. & Braver, T. S. (1997). Issues concerning relative speed of processing hypotheses, schizophrenic performance deficits, and prefrontal function: Comment on Schooler et al. (1997). *Journal of Experimental Psychology: General*, 126, 37-41.
- Barch, D. M., Braver, T. S., Cohen, J. D., & Servan-Schreiber, D. (1998). Context processing deficits in schizophrenia. *Archives of General Psychiatry*, 55, 187-188.
- Barch, D. M. (1999). The anterior cingulate and response competition. *American Journal of Psychiatry*, 156, 1948.
- Buckner, R. L. & Barch, D. M. (1999). Episodic memory retrieval. *American Journal of*

*Psychiatry*, 156, 1311.

Barch, D. M. (2003). Cognition in schizophrenia: Is working memory working? *Current Directions in Psychological Science*, 12(4), 146-150.

Barch, D. M., & Braver, T. S. (2004). Where the rubber meets the road: The importance of implementation. Commentary on Phillips and Silverstein. *Behavioral and Brain Sciences*.

Braver, T. S. & Barch, D. M. (2006). Extracting core components of cognitive control. *Trends in Cognitive Sciences*, 10, 529-532.

## **MEMBERSHIPS IN PROFESSIONAL ORGANIZATIONS**

American Psychology Association  
Society for Research in Psychopathology  
American Psychological Society  
Society for the Science of Clinical Psychology  
Society for Psychophysiology Research  
Cognitive Neuroscience Society  
Society for Neuroscience  
Memory Disorders Research Society  
Schizophrenia Research Society  
Psychonomics Society  
International Society for Behavioral Neuroscience

## **PROFESSIONAL EXPERIENCE**

Society for Research in Psychopathology – Program Committee (2000)  
Society for Research in Psychopathology – Local Host for Conference (2004)  
Society for Research in Psychopathology – Executive Board (2003-2005)  
\*Society for Research in Psychopathology – Secretary (2004-20011)  
Measurement and Treatment Research to Improve Cognition in Schizophrenia (MATRICS)  
Program – Neurocognition Committee Member  
Measurement and Treatment Research to Improve Cognition in Schizophrenia (MATRICS)  
Program – Conference Organizer  
Wellcome Trust – Ad Hoc Reviewer  
Canadian Research Council – Ad Hoc Reviewer  
Mental Health Research Institute of Victoria – Ad Hoc Reviewer  
\*National Institute of Mental Health – Standing APDA Committee Member  
Medical Research Council of the United Kingdom – Adhoc Review  
Scottish Medical Council – Adhoc Reviewer  
Israeli Research Council – Adhoc Reviewer  
\*American Psychiatric Association - DSM-V Psychosis Workgroup

## **JOURNAL SERVICE**

**Editor***Cognitive, Affective and Behavioral Neuroscience* (2007-2011)**Associate Editor***Journal of Abnormal Psychology* (2000-2007)**Editorial Board***Schizophrenia Bulletin* (2005 to present)**Reviewer***Aggressive Behavior**American Journal of Psychiatry**Archives of General Psychiatry**Biological Psychiatry**Cerebral Cortex**Cognitive, Behavioral and Affective Neuroscience**Cognition and Emotion**Cognitive Neuropsychology**Journal of Abnormal Psychology**Journal of Neuroscience**History of Neuroscience**Emotion**Journal of Cognitive, Affective, and Behavioral Neurosciences**Neuron**Neuropsychopharmacology**Neuroimage**Neuropsychology**Proceedings of the National Academy of Sciences**Psychiatry Research**Psychological Medicine**Psychophysiology**Schizophrenia Bulletin**Schizophrenia Research***UNIVERSITY SERVICE**

Neuroimaging Laboratory Protocol Review Committee, Department of Radiology, 1998-2001  
 Washington University

Olin Fellowship Committee, Washington University 2001-2003

Steering Committee, Cognitive, Computational and Systems Neuroscience Emphasis, Washington University 2001-Present

Reviewer, Biology Department Spector Prize Committee, Washington University 2000-Present

African American Studies Director Search Committee 2003-2004

Faculty Associate	2003-2004
Task Force on Graduate Education	2004-2006
Graduate Council Executive Committee	2004-2005, 2006-present
Chair, Graduate Council Policies and Procedures Committee	2004-2005
Undergraduate Life Committee of the Board of Trustees	2004-2005, 2006-2007
Faculty Council (Chair in 2008)	2006-2008
Chair, Graduate Council Teaching and Professional Development Committee	2006-present
McDonnell Center for Systems Neuroscience Operations Committee	2007-present
Chair, Graduate Council Executive Committee	2007-2008
Philosophy Search Committee	2007-2008
Undergraduate Life Sciences Committee	2008-present
Dean of Arts and Sciences Search Committee	2008-2009
University Academic Planning Committee	2008-present

#### **DEPARTMENTAL SERVICE**

Graduate Student Admissions Committee, Department of Psychology, University of Illinois at Urbana-Champaign.	1989-1991
Psychology Intern Admissions Committee, Western Psychiatric Institute and Clinic, University of Pittsburgh Medical School.	1994-1998
Image Analysis Center Committee, Department of Psychology, Washington University	1998-present
Clinical Search Committee, Department of Psychology, Washington University	1998
Clinical Neuropsychology Brown Bag Organizer, Department of Psychology, Washington University	1999-2001

Functional Neuroimaging Brown Bag Co-organizer, Department of, Psychology, Washington University	1999-2000
Baker Chair Search Committee, Department of Psychology, Washington University	2001-2002
Senior Chair Clinical Search Committee, Department of Psychology, Washington University	2002-2003
Clinical Psychology Colloquium Series Organizer, Department of Psychology, Washington University	2001-2006
Clinical Search Committee, Department of Psychology, Washington University	2003-2004
Clinical Search Committee, Department of Psychology, Washington University	2004-2005
Cognitive Neuroscience Search Committee, Department of Psychology, Washington University	2006-2007
Behavioral Genetics Search Committee, Department of Psychology, Washington University	2007-2008
Women Studies Search Committee, Department of Psychology, Washington University	2007-2008
Director of Graduate Studies, Department of Psychology Washington University	2004-present

### **INVITED PRESENTATIONS**

May 1992 — The relationship between information processing and language production. Ed Scheiderer Memorial Research Award Address, Department of Psychology, University of Illinois at Urbana-Champaign.

December 1996 — Thought and Language Disturbances in Schizophrenia: Cognitive and Neural Mechanisms. Invited Talk, State University of New York, Stonybrook, Stonybrook, New York.

January 1997 — Thought and Language Disturbances in Schizophrenia: Cognitive and Neural Mechanisms. Invited Talk, Washington University, St. Louis, Missouri.

January 1997 — Thought and Language Disturbances in Schizophrenia: Cognitive and Neural Mechanisms. Invited Talk, Tufts University, Boston.

- January 1997 — Thought and Language Disturbances in Schizophrenia: Cognitive and Neural Mechanisms. Invited Talk, University of Southern California.
- February 1997 — Thought and Language Disturbances in Schizophrenia: Cognitive and Neural Mechanisms. Invited Talk, University of Texas at Austin.
- February 1997 — Thought and Language Disturbances in Schizophrenia: Cognitive and Neural Mechanisms. Invited Talk, University of Colorado at Boulder.
- February 1997 — Thought and Language Disturbances in Schizophrenia: Cognitive and Neural Mechanisms. Invited Talk, University of Missouri at Columbia.
- May 1997 — Thought and Language Disturbances in Schizophrenia: Cognitive and Neural Mechanisms. Invited Talk, University of Minnesota, Minneapolis.
- May 1999 — The Cognitive and Neural Mechanisms Underlying Thought and Language Disturbances in Schizophrenia. Invited Address, Midwestern Psychological Association, Chicago, Illinois.
- November 1999 — Mechanisms of Cognitive Control: Clinical and Neuroimaging Investigations. Invited Address, University of Missouri, Columbia, Missouri.
- September 2000 — The Anterior Cingulate, Prefrontal Cortex, and Executive Control in Schizophrenia: fMRI and Behavioral studies, Invited Address, Executive Control, Errors, and the Brain Conference, Jena Germany
- January 2001 – Prefrontal Cortex, Cognitive Control and Schizophrenia. Invited Address, Society for Women Engineers, St. Louis, Missouri.
- November 2001 – Mechanisms of Cognitive Control. Invited Address, University of Illinois at Urbana-Champaign Neuroscience Colloquium Series, Champaign-Urbana, Illinois
- January 2002 – Cognitive Control Deficits in Schizophrenia. Invited Address, University of Michigan fMRI Colloquium Series, Ann Arbor Michigan
- January 2002 – Cognitive Control Deficits in Schizophrenia. Psychiatry Grand Rounds, Washington University, St. Louis Missouri
- January, 2002 – Cognitive Control Deficits in Schizophrenia. Clinical Psychology Research Colloquium, Washington University, St. Louis Missouri
- January 2002 – Cognitive Control Deficits in Schizophrenia. Behavior, Brain and Cognitive Seminar Series, Washington University, St. Louis Missouri
- April 2002 – Cognitive Control Deficits in Schizophrenia: Behavioral and Neuroimaging

Investigations. Conference on Integrative Psychological Science, Indiana University, Bloomington, Indiana.

May 2002 – Working memory and prefrontal cortex function in schizophrenia: Regional and memory domain specificity and non-specificity. Biological Psychiatry Conference, Philadelphia, Pennsylvania.

November 2002 – Cognitive Control Deficits in Schizophrenia: Behavioral and Neuroimaging Investigations. Invited Colloquium, Behavioral Neuroscience Department, Oregon Health Sciences University

May 2003 – Cognitive and Neural Mechanisms of Control Deficits in Schizophrenia. Invited Address, American Psychological Society Conference, Atlanta, GA.

May 2003 – The Nature and Causes of Language Dysfunction in Schizophrenia. Invited Lecture, St. Louis Psychology Internship Consortium, St. Louis, MO.

May 2003 – Functional Imaging in Neuropsychiatric Disorders. Invited Lecture, Washington University Residents Lecture Series, St. Louis, MO.

June 2003 – Pharmacological Manipulation of Human Working Memory. Invited Talk, MATRICS Neuropharmacology Meeting, Bethesda, MD.

October 2003 – Cognitive and Neural Mechanisms of Control Deficits in Schizophrenia. Invited Talk, Harvard/MGH Brain Mapping Colloquium, Boston, MA.

November 2003 – Cognitive and Neural Mechanisms of Control Deficits in Schizophrenia. Invited Talk, Saint Louis University, St. Louis, MO.

December 2003 – Functional Brain Imaging of Human Cognition. Teaching Day Presentation, American College of Neuropsychopharmacology, San Juan, Puerto Rico.

February 2004 – Episodic Memory Deficits in Schizophrenia: What Parts and Why?. Behavior, Brain and Cognitive Seminar Series, Washington University, St. Louis Missouri

February 2004 – Cognitive Control Deficits in Schizophrenia. University Management Team, Washington University, St. Louis Missouri

May 2004 – Cognitive Control Deficits in Schizophrenia. Behavioral and Neuroimaging Investigations. Research Day Presentation, University of Minnesota Psychology Department, Minneapolis, Minnesota.

June 2004 – Language Dysfunction in Schizophrenia. Invited Lecture, St. Louis Psychology Internship Consortium, St. Louis, MO.

July 2004 – What can research on schizophrenia and other neurological disorders tell us about the

cognitive neuroscience of working memory. Invited Workshop, Cognitive Neuroscience Summer School on Working Memory, Bled, Slovenia.

July 2004 – What can research on schizophrenia tell us about the cognitive neuroscience of working memory. Invited Talk, Symposium on Working Memory, Ljubljana, Slovenia.

October 2004 – fMRI of cognitive and emotional processing: Is there we are headed?. Invited Talk, 3<sup>rd</sup> Annual Global Symposium on High Field Imaging: Stanford Radiology Continuing Education, Los Vegas, NE.

December 2004 – Memory processing in schizophrenia. Invited Talk, Philosophy, Neuroscience and Psychological Luncheon Series, St. Louis, MO.

February 2005 – Cognitive Control Deficits in Schizophrenia: Neurobiological and Psychological Mechanisms. International Neuropsychological Society Continuing Education, St. Louis, MO.

February 2005 – Cognitive Control Deficits in Schizophrenia: Neurobiological and Psychological Mechanisms. Colloquium, University of Maryland Schizophrenia Research Day, Baltimore Maryland.

February 2005 – Cognitive and Emotional Control Deficits in Schizophrenia: Neurobiological and Psychological Mechanisms. Departmental Colloquium, Vanderbilt University, Nashville, TN.

February 2005 – Cognitive Control Deficits in Schizophrenia: Relationships to Emotional Processing. Conte Center Research Seminar, Washington University, St. Louis, MO.

February 2005 – Cognitive and Emotional Control in Schizophrenia. Invited Talk, Philosophy, Neuroscience and Psychological Works in Progress Series, St. Louis, MO.

March 2005 – Cognitive and Emotional Control Deficits in Schizophrenia: Neurobiological and Psychological Mechanisms. Departmental Colloquium, University of Michigan, Ann Arbor, MI.

May 2005 – How Can Cognitive Neuroscience Measures Be Best Used in Clinical Trials. Society for Biological Psychiatry Workshop, Atlanta, Georgia.

May 2005 – Emotional Regulation in Schizophrenia. Neuroimaging Laboratory Lecture Series, Washington University, St. Louis, MO.

June 2005 – The Causes and Risks of Developing Schizophrenia. NARSAD Research Symposium, St. Louis, MO.

November, 2005 – Cognitive and Emotional Control in Schizophrenia: Slovenia Neuroscience Symposium, Ljubljana, Slovenia.

- December, 2005 – Cognitive and Emotional Control in Schizophrenia: Chaucer Club Lecture Series, Cognitive and Brain Unit, Cambridge, England.
- December 2005 – Episodic Memory in Schizophrenia: University College London Memory Club, London, England.
- January 2006 – Episodic Memory in Schizophrenia: Institute of Psychiatry Schizophrenia Research Group, London England.
- February 2006 – Proactive and Reactive Cognitive Control in Schizophrenia: Department of Psychology, Cardiff University, Cardiff, Wales.
- March 2006 – Wanting and Liking in Schizophrenia: Learning Processes in Schizophrenia: Prediction Error and Connectivity Conference. Functional Imaging Laboratory, London, England.
- March 2006 – Cognitive Control in Schizophrenia: Department of Psychiatry, University of Edinburgh, Edinburgh, Scotland.
- May 2006 – Cognitive Control in Schizophrenia: Institute of Psychiatry, Psychosis Interest Group, London, England.
- May 2006 – Cognitive Control in Schizophrenia: Zangwill Club Lecture Series, University of Cambridge, Cambridge, England.
- June 2006 – Cognition, Motivation and Learning in Schizophrenia, Cognitive Remediation in Psychiatry Conference, New York, New York.
- January 2007 – Cognitive Control in Schizophrenia. Translational Neuroscience Research Seminar Series, University of Pittsburgh, Pittsburgh, PA.
- March 2007 – Cognitive and Emotional Control in Schizophrenia. Department of Psychology Colloquium Series, University of Iowa, Iowa City, Iowa.
- May 2007 – Schizophrenia: Losing Control over Thoughts, Memories and Emotions. Distinguished Lectures on Brain, Learning and Memory. UC Irvine, Irvine, California.
- November 2007 – Schizophrenia and Cognitive Control. Tubin Visiting Professor Lecture Series, UC Davis, Davis California.
- April 2008 – Schizophrenia: Losing Control over Thoughts, Memories and Emotions. McMaster University Research Day Keynote Speaker, McMaster University, Toronto Canada
- May 2008 – Schizophrenia: Emotion and Motivation. NARSAD Research Symposium, St. Louis, Missouri.

June 2008– The Cognitive Neuroscience of Schizophrenia. Cold Spring Harbor Schizophrenia Course, Cold Spring Harbor, Long Island, New York.

Oct 2008– Cognitive and Affective Control in Schizophrenia. Keynote Speaker, Society for Psychophysiological Research, Austin Texas.

Jan 2009– Cognitive and Neural Mechanisms of Disrupted Control in Schizophrenia. Grand Rounds, Northwestern School of Medicine, Chicago, Illinois.

Mar 2009– Cognitive and Affective Control in Schizophrenia. University of British Columbia Psychology Department Colloquium, Vancouver, British Columbia.

## **TEACHING**

Abnormal Psychology (354)  
Neuropsychological Syndromes (5523)  
Personality Assessment (5111)  
Biological Bases of the Major Mental Disorders (4765)  
fMRI Methods (4450)  
Project Building Cognitive Computational and Systems Neuroscience  
Biological Foundations of Behavior (5581)

## **DISSERTATION AND HONORS THESIS COMMITTEES**

### **Doctoral Committee Chair**

Beth Keys (2001; Co-Chaired with Todd Braver). *Age-related deficits in inhibition: Exploring the role of endogenous control.*

Jennifer Burbridge (2004). *Subjective experience of emotion in schizophrenia.*

Meredith Dodge Melinder (2004). *Automatic versus controlled priming in individuals with schizophrenia.*

Carrie Racine (2005). *Learning during older adulthood: The relation to age-related changes in prefrontal cortex function*

Jennifer Mathews (2007). *Emotional processing, social cognition, and social functioning deficits in schizophrenia.*

Shefali Brahmabhatt (present). *Functional neuroanatomy of working memory as a risk factor for schizophrenia*

Aaron Bonner-Jackson (present). *Associative memory processing in Schizophrenia*

Jessica Paxton (present). *Cognitive training for transfer in healthy aging.*

Alicia Vogel (present). *The developmental functional neuroanatomy of orthographic processing.*

### **Doctoral Committee Member**

Andrea Gebhart (2002). *The specific contributions of the posterolateral cerebellum to verbal and spatial learning in humans.*

Caroline Hollnagel (2002). *Working memory and inhibition in mild Parkinson's Disease.*

Ellen Landers (2003). *Mental disorder in a biomedical age: Problems with symptoms, perils of reduction.*

Michelle Kincaid (2004). *Attention Orienting Networks in the Human Brain: An Event-Related fMRI Investigation.*

Tim Brown (2005). *Progressive and regressive developmental changes in human cerebral functional organization.*

Erica Brandling-Bennet (2005). *Categorization during typical development.*

Greg Burgess (2005). *Relationships between GF, personality and academic success: Implications for understanding the neural mechanisms of executive control.*

Jeremy Reynolds (2005). *On the roles of duration and computational complexity in the recruitment of fronto-polar prefrontal cortex.*

Nico Dosenbach (2006). *Task set control.*

Vanessa Cabresse (2007 – SUNY Binghamton). *Context processing in high schizotypal individuals.*

Khena Swallow (2007). *Memory across event boundaries.*

Chad Sylvester (2007): *Mechanisms of top-down modulation of early visual signals.*

Meghana Karnik (current). *Genetic effects on structure-function correlations.*

Jessica Church (current). *Functional Brain Development.*

Hannah Sypher-Locke (current). *Motivational and personality influences on cognitive control and task performance.*

## **Doctoral Committee Reader**

Rebekah Honey (2002). *Cognitive and physiological correlates of discourse coherence disturbance symptoms in schizophrenia*. (University of Western Australia, Outside Reader)

## **Undergraduate Honors Theses**

Jennifer Lofton Mathews (2001). *Assessing emotional processing in patients with schizophrenia using episodic memory for emotional and non-emotional words*.

Daniel Bagner (2001). *Working memory and language comprehension in schizophrenia*.

Becky Oswald (2002). *The relationships among cortisol, perceived life stress, and working memory function*.

Nick Eaton (2003). *The relationships between behavior, symptoms and brain activity in schizophrenia*.

Jess Yokley (2003). *Homograph priming in schizophrenia*.

Natalie Badows (2007). *Effects of prior substance abuse/dependence on functional brain activation in schizophrenia*.

Elias Wan (2008). *The Effects of Interference and Trait Anxiety on Working Memory in Different Memory Phases*