

## Curriculum Vitae

### Deanna Marie Barch

#### PERSONAL

Mailing Address: Department of Psychology  
Washington University  
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St. Louis, MO 63130

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Birthdate: July 20, 1965, St. Louis, Missouri

#### EDUCATION

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

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

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

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

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

#### 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

2014-Present Chair, Department of Psychology  
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

2002 American Psychological Association Distinguished, Scientific Award for Early Career Contribution to Psychology in the area of Psychopathology

2002 The Joseph Zubin Memorial Fund Award

2003 Arts Council Faculty Award, Washington University

2004 Special Recognition, Outstanding Faculty Mentor Award, Graduate Student Senate, Washington University

2007 NAMI St. Louis Outstanding Scientist Award

2009 Fellow, Association of Psychological Science

2010 Washington University Distinguished Faculty Award

2010 Special Recognition, Outstanding Faculty Mentor Award, Graduate Student Senate, Washington University

2011 Gregory B. Couch Professor of Psychiatry

- 2012 President, Society for Research in Psychopathology
- 2013 Member, American College of Neuropsychopharmacology

## 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
- 2012 Provost's Office Fellowship to Participate in the Washington University Women's Leadership Certificate

## RESEARCH GRANTS

### Current and Past

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

PI: Deanna M. Barch	
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	1998-2001
National Institutes of Health (R03 MH60887) Working and long-term memory deficits in schizophrenia PI: Deanna M. Barch	1999-2000
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	2000-2001
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	2000-2001
National Alliance for Research on Schizophrenia and Depression Novel cognitive and neuroimaging approaches to assessing risk for schizophrenia PI: Deanna M. Barch	2000-2002
Dana Clinical Hypotheses Program in Imaging Prefrontal cortex dysfunction as a risk factor for the development of schizophrenia PI: Deanna M. Barch	2000-2003
National Institutes of Health (R01 MH60697) Treatment outcomes in vascular depression PI: Yvette Sheline, Co-Investigator: Deanna M. Barch	2001-2006
National Institutes of Health (P20 MH62130) Structure function and cognition in schizophrenia (Project 2 In Conte Feasibility Center) PI: Deanna M. Barch	2001-2004
McDonnell Center for Higher Brain Function Neural substrates of decision-making PI: Len Green, Co-Investigator: Deanna M. Barch	2002-2004
National Alliance for Research on Schizophrenia and Depression Human reward system alternations in major depression PI: Yvette I. Sheline, Co-Investigator: Deanna M. Barch	2003-2005
National Institutes of Health (R01 MH64821) fMRI studies of emotional circuitry in depression PI: Yvette I. Sheline, Co-Investigator: Deanna M. Barch	2003-2008

National Institutes of Health (R01 MH066031) Schizophrenia, prefrontal cortex, and emotional regulation PI: Deanna M. Barch	2004-2008
National Institutes of Health (P20 MH62130) Structure function and cognition in schizophrenia (Project 2 In Conte Center for the Neuroscience of Mental Disorders) PI: Deanna M. Barch	2004-2009
National Alliance for Research on Schizophrenia and Depression Young Investigators Award Error Prediction Mechanisms in Schizophrenia PI: Josh Brown, Mentor: Deanna M. Barch	2004-2006
National Institutes of Health (R13) Brain – Based Measures for Treatment Development of Impaired Cognition in Schizophrenia PI: Cameron Carter, CO-PI: Deanna Barch	2006-2008
National Institutes of Health Contract Treatment Units Research Network PI: Steve Marder, Chief Neuropsychologist: Deanna Barch	2005-2009
National Alliance for Research on Schizophrenia and Depression Established Investigators Award Developmental Disturbances in the Neural Systems Supporting Working Memory As Endophenotypic Markers of Risk for Schizophrenia PI: Deanna M. Barch	2006-2008
McDonnell Center for Higher Brain Function Strategy Influences on Brain Function in Aging PI: Deanna Barch	2006-2008
National Alliance for Research on Schizophrenia and Depression Young Investigators Award Proactive Control in Generalized Anxiety Disorder PI: Christina Fales, Mentor: Deanna M. Barch	2007-2009
National Institutes of Health (R01 MH056584-09) Neuromorphometry in Schizophrenia by Computer Algorithm PI: John G. Csernansky, Co-Investigator: Deanna M. Barch	2007-2012
Communities Healing Adolescent Depression and Suicide Neural Changes Associated With Treatment in Preschool Onset Depression PI: Joan Luby, Co-PI: Deanna M. Barch	2008-2010
National Institutes of Health (R01 MH084840) Cognitive Neuroscience Task Reliability & Clinical Applications Consortium PI: Deanna M. Barch	2008-2011
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
- National Institutes of Health (R13) 2009-2011  
Brain – Based Measures for Treatment Development of Impaired Cognition in  
Schizophrenia: Extension to Animal Models and Biomarkers.  
PI: Cameron Carter, CO-PI: Deanna Barch
- National Institutes of Health (R01 MH066031-5) 2009-2014  
Schizophrenia, prefrontal cortex, and emotional regulation  
PI: Deanna M. Barch
- National Institutes of Health (R01 MH090786-01) 2010-2015  
Neuroimaging in Early Onset Depression:  
Longitudinal Assessment of Brain Changes  
PIs: Deanna M. Barch, Joan Luby, Kelly Botteron
- National Institutes of Health (R01 MH62130) 2010-2012  
Cognitive Neuroscience Task Reliability & Clinical Applications Consortium: Imaging  
Biomarkers Supplement  
PI: Deanna M. Barch
- National Institute of Health Blueprint 2010-2015  
Human Connectome Project  
PI: David Van Essen (Role: Co-Investigator)
- Sidney R. Baer Foundation 2012-2014  
Brain imaging in preschoolers at high-risk for depression: A search for early alterations  
in affective neurocircuitry as markers for risk and targets for intervention  
Co PIs: Joan Luby & Deanna Barch
- National Science Foundation (1131291) 2011-2014  
CRCNS Data Sharing: An open data repository for cognitive neuroscience: the Open  
fMRI Project  
PI (Polldrack, Co-PI, barch)
- National Institutes of Health (2 T32 GM081739) 2012-2017  
Training at the Interface of Psychology, Genetics and Neuroscience  
PI: Deanna M. Barch
- National Institutes of Health (2 T32 MH100019) 2013-2018  
Developmental Neuroscience and Child Psychopathology  
PIs: Deanna M. Barch and Joan L. Luby
- National Institutes of Health (2 R01 MH084840) [RENEWAL] 2013-2017  
Cognitive Neuroscience Task Reliability & Clinical Applications Consortium  
PI: Deanna M. Barch
- NARSAD Distinguished Investigator's Award 2014-2015  
Neural and Psychological Predictors of Risk for Depression in Children  
PI: Deanna M. Barch

National Institutes of Aging (R01 AG049369) Remediation Age Related Cognitive Decline: Mindfulness-Based Stress Reduction and Exercise PI: Lenze (Co-I Barch)	2014-2019
National Institutes of Health (R01 MH104414) Connectomics in Psychiatric Classification PI: Mamah (Co-I Barch)	2014-2019
National Institutes of Health (R01 MH098454) A Randomized Controlled Trial of PCIT-ED for Preschool Depression – Competitive Supplement to use ERP and FMRI to measure mechanisms and predictors of change PIs: Deanna M. Barch and Joan L. Luby	2015-2018
National Institutes of Health (R01 MH090786-06) Neuroimaging in Early Onset Depression: Longitudinal Assessment of Brain Changes -- Renewal PIs: Deanna M. Barch, Joan Luby	2015-2020
National Institutes of Health (U01A005020803) Adolescent Brain and Cognitive Development – USA Consortium Site PIs: Madden, Heath and Barch	2015-2020
National Institutes of Health (U01 MH) Neural Meta-Structure of Psychopathology PIs: Deanna M. Barch & Andrew Heath	pending
National Institutes of Health Human Connectome Project - Development PIs: David Van Essen and Deanna M. Barch	pending
National Institutes of Health Human Connectome Project - Aging PIs: David Van Essen and Beau Ances (Co-I Barch)	pending

**JOURNAL ARTICLES (peer reviewed)**

**#Undergraduate Student**

**\*Graduate Student**

**1993-2000**

- [1]. 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.
- [2]. Barch, D. M., & Berenbaum, H. (1994). The relationship between information processing and language production. *Journal of Abnormal Psychology*, 103, 241-250.

- [3]. Stolar, N., Berenbaum, H., Banich, M., & Barch, D. M. (1994). Neuropsychological correlates of alogia and affective flattening in schizophrenia. *Biological Psychiatry*, *35*, 164-172.
- [4]. Berenbaum, H. & Barch, D. M. (1995). The categorization of thought disorder. *Journal of Psycholinguistic Research*, *24*, 349-376.
- [5]. Barch, D. M. & Berenbaum, H. (1996). Language production and thought disorder in schizophrenia. *Journal of Abnormal Psychology*, *105*, 81-88.
- [6]. 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.
- [7]. Barch, D. M., & Berenbaum, H. (1997). Language generation in schizophrenia and mania. *Journal of Psycholinguistic Research*, *26*, 410-412.
- [8]. 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.
- [9]. 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.
- [10]. 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.
- [11]. Barch, D. M., & Carter, C. S. (1998). Selective attention in schizophrenia: Relationship to verbal working memory. *Schizophrenia Research*, *33*, 53-61.
- [12]. 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.
- [13]. 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
- [14]. 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.
- [15]. 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.



- [16]. 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.
- [17]. 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.
- [18]. 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.
- [19]. 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.

## 2001

- [20]. 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.
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- [23]. 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.
- [24]. 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.
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- [26]. 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.

## 2002

- [27]. 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.
- [28]. Braver, T. S. & Barch, D. M. (2002). A theory of cognitive control, aging cognition and neuromodulation. *Neuroscience and Biobehavioral Reviews, 26*, 809-817.
- [29]. \*Burbridge, J. & Barch, D. M. (2002). Affective influences on reference production in schizophrenia. *Journal of Abnormal Psychology, 111*, 186-191.

### 2003

- [30]. 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.
- [31]. 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.
- [32]. #Bagner, D., \*Melinder, M. R. D., & Barch, D. M. (2003). Working memory and language comprehension in schizophrenia. *Schizophrenia Research, 60*, 299-309.
- [33]. 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.
- [34]. \*Melinder, M. R. D. & Barch, D. M. (2003). Working memory manipulations of language production in schizophrenia. *Schizophrenia Bulletin, 29*, 473-484.

### 2004

- [35]. Barch, D. M., Carter, C. S., & Cohen, J. D. (2004). Factors influencing Stroop performance in schizophrenia. *Neuropsychology, 18*, 477-484.
- [36]. Barch, D. M. (2004). Pharmacological manipulations of human working memory. *Psychopharmacology, 174*, 126-135.
- [37]. 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.
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NIMH-MATRICES conference to select cognitive domains and test criteria. *Biological Psychiatry*, 56, 301-307.

- [40]. Hershey, T., Black, K. J., Hartlein, J., Barch, D. M., Braver, T. S., Carl, J. L., & Perlmutter, J. S. (2004). Cognitive-pharmacologic fMRI in Tourette syndrome: A pilot study. *Biological Psychiatry*, 55, 916-925.
- [41]. Hershey, T., Black, K. J., Hartlein, J., Braver, T. S., Barch, D. M., Carl, J. L., & Perlmutter, J. S. (2004). Dopaminergic modulation of response inhibition: An fMRI study. *Cognitive Brain Research*, 20, 438-448.
- [42]. \*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.
- [43]. 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.

## 2005

- [44]. 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.
- [45]. Barch, D. M. & Carter, C. S. (2005). Amphetamine improves cognitive function in medicated individuals with schizophrenia and healthy controls. *Schizophrenia Research*, 77, 43-58.
- [46]. 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.
- [47]. \*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. PMID: PMC1361687
- [48]. \*Burbridge, J., Larsen, R., & Barch, D. M. (2005). Affective reactivity of language: The role of psychophysiological arousal. *Emotion*, 5, 145-153.
- [49]. \*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.
- [50]. \*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.
- [51]. 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.

- [52]. 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.
- [53]. \*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.
- [54]. \*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.

## 2006

- [55]. \*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.
- [56]. Barch, D. M. (2006). What can research on schizophrenia tell us about the cognitive neuroscience of working memory? *Neuroscience*, 139, 73-84.
- [57]. \*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.
- [58]. \*Delawalla, Z., Barch, D. M., Eastup, J, Thomason, E., Hanewinkle, M., Thompson, P. A. & Csernansky, J. G. (2006). Factors mediating deficits in cognitive function and clinical symptoms among siblings of individuals with schizophrenia. *Schizophrenia Bulletin*, 32, 525-537. PMID: PMC2632255
- [59]. #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.
- [60]. \*Mathews, J. R. & Barch, D. M. (2006). Episodic memory for emotional and non-emotional words in individuals with anhedonia. *Psychiatry Research*, 143, 121-133.
- [61]. \*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.
- [62]. \*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.
- [63]. \*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.
- [64]. 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.

## 2007

- [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. PMID: 1760661 [PubMed - indexed for MEDLINE]
- [66]. Barch, D. M. & Smith, E. E. (2008). The cognitive neuroscience of working memory: Relevance to CNTRICS and schizophrenia. *Biological Psychiatry*, 64, 11-17. PMCID: PMC2483314
- [67]. \*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.
- [68]. \*Burbridge, J. A., & Barch, D. M. (2007). Anhedonia and the subjective experience of emotion in schizophrenia. *Journal of Abnormal Psychology*, 116, 30-42. PMID: [PubMed - indexed for MEDLINE]
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## In Press

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## MANUSCRIPTS UNDER REVIEW

- Abrams, S. V., Wisner, K. M., Fox, J. M., Barch, D. M., Wang, L., Csernanaksy, J. G., MacDonald, A. W., Smith, M. J. (submitted). Functional connectivity between the superior temporal gyrus and prefrontal cortices predicts mentalizing and negative symptoms in schizophrenia.
- Barch, D. M., Marder, S. R., Harms, M. P., Jarskog, L. F., Buchanan, R. W., Cronenwett, W., Chen, L., Weiss, M., Maguire, R. P., Pezous, N., Feuerbach, D., Lopez-Lopez, C., Behreje, R. B., & Gomez-Mancilla, B. (submitted). Task-related fMRI responses to a nicotinic acetylcholine receptor partial agonist in schizophrenia: a randomized trial.
- \*Ceaser, A., Etzel, J., & Barch, D. M. (submitted). Differential contributions of cortical and subcortical brain regions to cognitive control demands.
- \*Culbreth, A. J., Westbrook, A., Daw, N. D., Botvinick, M., & Barch, D. M. (in submission). Reduced model-based decision-making in schizophrenia.
- \*Culbreth, A. J., Westbrook, A., & Barch, D. M. (in submission). Negative symptoms are associated with an increased subjective cost of cognitive effort.
- \*Culbreth, A. J., Westbrook, A., Zu, Z., Barch, D. M., & Waltz, J. A. (in submission). Intact ventral striatal prediction error signaling in medicated schizophrenia patients.
- \*Dowd, E. C., Frank, M., Collins, A., & Barch, D. M. (in revision). Probabilistic reinforcement learning in schizophrenia: Relationships to anhedonia and avolition.
- Eisenstein, S. A., Bogdan, R., Koller, J. M., Black, K. J., Moerlein, S. M., Perlmutter, J. S., Barch, D. M., & Hershey, T. (submitted). Prediction of striatal D2 receptor binding by DRD2/ANKK1 Taq1A allele status.
- Eisenstein, S. A., Bogdan, R., Moerlein, S. M., Perlmutter, J. S., & Barch, D. M. (submitted). Negative symptom severity is related to genetic dopamine signaling capacity and D2 receptor binding in healthy controls and in schizophrenia.
- Gilbert, K., Luking, K., Pagliaccio, D., Luby, J. L., & Barch, D. M. (submitted). Dampening and positive rumination of positive life events: Associations with depression symptoms in children at risk for depression.
- #Komal, Z., \*Culbreth, A., Barch, D. M. (submitted). Reward motivation in patients of schizophrenia with high versus low anhedonia/amotivation.
- Luby, J. L., Belden, A. C., Whalen, D., Harms, M. P., & Barch, D. M. (submitted). Breastfeeding and childhood IQ: The mediating role of gray matter volume.
- Luby, J. L., Belden, A. C., Harms, M. P., Tillman, R., & Barch, D. M. (submitted). Preschool maternal support and the trajectory of later childhood hippocampal development:



Evidence for a sensitive period and implications for emotion functioning.

Moran, E. K., Culbreth, A. J., & Barch, D. M. (submitted). Ecological momentary assessment of negative symptoms in schizophrenia: Relationships to effort based decision making and reinforcement learning.

Murphy, E. R., Sylvester, C. M., Luby, J. L., & Barch, D. M. (submitted). Pubertal sex hormones associated with functional connectivity and depressive measures in girls with MDD history.

Poppe, A. B., Barch, D. M., Carter, C. S., Gold, J. M., Ragland, J. D., Silverstein, S. M., & MacDonald, A. W. (submitted). Reduced frontoparietal activity in schizophrenia is linked to a specific deficit in goal maintenance: A multi-site functional imaging study.

Rogers, C. E., Sylvester, C. M., Mintz, C., Kenley, J., Shimony, J. S., Barch, D. M., & Smyser, C. D. (submitted). Neonatal amygdala functional connectivity at rest in healthy and preterm infants and early internalizing symptoms.

Sabharwal, A., Kotov, R., Szekely, A., Leung, H. C. Barch, D. M., & Mohanty, A. (submitted). Neural markers of emotional face perception across psychotic disorders and healthy population

#Saxena, A., \*Luking, K. R., Barch, D. M., & \*Pagliaccio, D. (submitted). Relations between anhedonia, negative mood, and emotional reactivity to affective stimuli.

\*Sheffield, J. M., Kandala, S., Burgess, G. C., Harms, M. P. & Barch, D. M. (submitted). Cingulo-opercular network efficiency mediates the association between psychotic-like experiences and cognitive ability in the general population.

#Suh, D. & Barch, D. M. (in submission). The relationship between individual differences in rumination, distractibility and depression.

Whalen, D. J., Belden, A. C., Tilman, B., Barch, D. M., & Luby, J. L. (submitted). Early adversity, psychopathology and latent class profiles of global physical health from preschool through early adolescence.

Whalen, D. J., Gilbert, K. E., Barch, D. M., Luby, J. L. & Belden, A. C. (submitted). Variation in common preschool sleep problems as an early predictor for school age depression.

## **CONSORTIUM RELATED PUBLICATIONS**

Marcus, D. S., Harwell, J., Olsen, T., Hodge, M., Glasser, M. F., Prior, F., Jenkinson, M., Laumann, T., Curtiss, S. W., & Van Essen, D. C., for the WU-Minn HCP Consortium. (2011). Informatics and data mining tools and strategies for the human connectome project. *Frontiers in Neuroinformatics*, 5, 4.

## **BOOK CHAPTERS AND BOOKS**

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- schizophrenia. In Simpson, E., and Balsam, P (Eds). Behavioral Neuroscience of Motivation: Topics in Behavioral Neuroscience: Springer Press.
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#### INVITED REVIEWS AND COMMENTARIES

- [1]. 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.
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- [8]. Barch, D. M. (2008). Keeping the "cognitive" in cognitive neuroscience, the "affective" in affective neuroscience, and the "behavioral" in behavioral neuroscience: the CABN mission for the next five years. *Cognitive, Affective and Behavioral Neuroscience*, 8, 1-2.

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- [10]. Barch, D. M. (2010). Mechanisms of capacity limitations in schizophrenia: Commentary on Gold et al., 2010. *Schizophrenia Research Forum*.
- [11]. Anticevic, A., Van Snellenberg, J., & Barch, D. M. (2012). Neurobiology of emotional dysfunction in schizophrenia: New directions revealed through meta-analyses. *Biological Psychiatry*.
- [12]. Barch, D. M. (2013). The Clinical Assessment Interview for Negative Symptoms (CAINS): Final development and validation: Commentary. *American Journal of Psychiatry*, 170, 133-135.
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- [15]. Barch, D. M. (2013). Brain Network Interactions in Health and Disease. Commentary on Palaniyappan et al. *Neuron*, 17, 603-605.
- [16]. Barch, D. M. & Yarkoni, T. (2013). Introduction to Special Issue on Replication and Reliability. *Cognitive, Affective and Behavioral Neuroscience*, 13, 687-689.
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- [19]. Van Snellenberg, J.X & Barch, D. M. (2104). Introduction to the special issue in honor of Edward E. Smith. *Cognitive, Affective and Behavioral Neuroscience*, 14, 1-2.
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- [25]. Carter, C.S., Lesh, T., & Barch, D. M. (in press). Thresholds, Power and Sample Sizes in Clinical Neuroimaging. *Biological Psychiatry*.

### **MEMBERSHIPS IN PROFESSIONAL ORGANIZATIONS**

American College of Neuropsychopharmacology  
Cognitive Neuroscience Society  
FLUX Society: International Congress for Integrative Developmental Cognitive Neuroscience  
Memory Disorders Research Society  
Psychonomics Society  
Schizophrenia Research Society  
Society for Biological Psychiatry  
Society for Research in Psychopathology

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#### **Past:**

Mental Health Research Panel Co-Chair (Common Data Elements for NIMH research)  
Program Committee, International Congress on Schizophrenia Research (2015)  
Program Committee, Reinforcement Learning and Decision Making Conference (2015)  
Institute of Medicine – Cognitive Dysfunction in Depression Workshop Committee  
National Institute of Mental Health – Standing APDA Committee Member (2006-2010)  
Society for Research in Psychopathology – Secretary (2004-2011)  
Society for Research in Psychopathology – Program Committee (2000, 2010)  
Society for Research in Psychopathology – Local Host for Conference (2004)  
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Biomarkers Consortium MATRICS-CT Working Group  
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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  
Medical Research Council of the United Kingdom – Adhoc Review  
Scottish Medical Council – Adhoc Reviewer  
Israeli Research Council – Adhoc Reviewer  
Course Director, Summer Institute for Cognitive Neuroscience (2011)  
Psychological Clinical Science Accreditation Review Committee Member  
American Psychiatric Association - DSM-V Psychosis Workgroup  
Society for Research in Psychopathology – President (2012-2013)  
External Advisory Board, University of Colorado at Boulder Basic Science Center  
External Advisory Board, University of Pittsburgh Conte Center  
American Psychiatric Association DSM-5 Revision Committee

## **JOURNAL SERVICE**

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### **Special Guest Editor (2012)**

*Neurobiology of Disease: Special Issue on the Neurobiology of Depression.*

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### **Reviewer**

*Aggressive Behavior*

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*Cognition and Emotion*

*Cognitive Neuropsychology*

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*History of Neuroscience*

*Emotion*

*Journal of Cognitive, Affective, and Behavioral Neurosciences*

*Molecular Psychiatry*  
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*Neuropsychopharmacology*  
*Neuroimage*  
*Neuropsychology*  
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*Schizophrenia Research*

## UNIVERSITY SERVICE

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Faculty Associate	2003-2004
Task Force on Graduate Education	2004-2006
Graduate Council Executive Committee	2004-2005, 2006-2012
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
Philosophy Search Committee	2007-2008
Dean of Arts and Sciences Search Committee	2008-2009
Chair, Graduate Council Teaching and Professional Development Committee	2006-2012
Chair, Graduate Council Executive Committee	2007-2008, 2009-2012
Undergraduate Life Sciences Committee	2008-2010
Human Subjects Quality Assurance Committee	2009-2012

Chair, Vice Chancellor for Research Search Committee	2009-2010
Freshman Reading Program	2008,2009, 2011, 2012, 2013
Promotion and Tenure Committee	2011-2014
Faculty Leadership Committee	2012-2014
University Sexual Assault Investigative Board (USAIB)	2013-2015
Chair, Dean of the Graduate School Search Committee	2013
Search Committee, Vice Chancellor for Student Affairs	2014-2015
Steering Committee, Cognitive, Computational and Systems Neuroscience Pathway	2001-Present
McDonnell Center for Systems Neuroscience Operations Committee	2007-present
University Academic Planning Committee	2008-present
Associate Director Board of the WU-IDDRC	2014-present
Center For High Performance Computing Steering Committee	2014-present
Security and Privacy Governance Committee	2014-present
<b>DEPARTMENTAL SERVICE</b>	
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	1998-2012
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 2004-2005 2010-2011 2011-2012
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	2004-2014
Chair, Department of Psychology Washington University, St. Louis, Missouri	2014-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, Stony Brook, Stony Brook, 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, Las 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.

Feb 2009– Cognitive and Affective Control in Schizophrenia. Grand Rounds, University of Michigan, School of Medicine, Ann Arbor, Michigan.

Feb 2009– Cognitive Neuroscience in the Era of Translation. Invited Seminar, Translational Cognitive Neuroscience Seminar, Psychology Department, University of Michigan, Ann Arbor, Michigan.

Mar 2009– Prefrontal/Hippocampal Interactions in the Control of Episodic Memory in Schizophrenia. Invited Talk, Cognition Satellite Symposium, International Congress on Schizophrenia Research, San Diego, CA.

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

May 2009 – Emotion, Motivation and Reward in Psychiatric Disorders. 1<sup>st</sup> NIMH Brain Camp. Cold Spring Harbor, New York.

- Jun 2009 – Cognition in Psychosis: Similarities and Differences Across the Mood and Psychotic Disorders Spectrum. 8<sup>th</sup> International Conference on Bipolar Disorder, Invited Talk, Pittsburgh, Pennsylvania.
- Sept 2009 – Emotion and Motivation in Psychosis. New York State Psychiatric Institute Colloquium, New York, New York.
- Oct 2009 – Emotion and Motivation in Psychosis. Washington University Neuroscience Seminar Series, St. Louis, MO.
- Nov 2009 – COMT, Prefrontal Cortex, and Psychosis. PNP Works in Progress Series. Washington University Neuroscience Seminar Series, St. Louis, MO.
- Jan 2010 – Emotion and Motivation in Psychosis. Semel Institute for Neuroscience, University of California at Los Angeles, Los Angeles, CA.
- Jan 2010 – Cognitive and Affective Control in Schizophrenia. NINDS Lecture Series. Washington University in St. Louis, St. Louis, MO.
- May 2010 – Cognitive and Affective Control in Schizophrenia. Nordic Center for Excellence in Cognitive Control. St. Petersburg, Russia
- November 2010 – Crossing the Basic to Clinical Divide: Results from the *Cognitive Neuroscience Task Reliability & Clinical Applications (CNTRACs) Consortium* Study. Vanderbilt Psychiatry Grand Rounds, Vanderbilt University, Nashville TN.
- December 2010 – Altered Functional Brain Responses and Connectivity in Preschool Onset Depression. University of Waterloo Departmental Colloquium, Waterloo, CA.
- January 2011 – Motivation, Reward and Cognitive Control. 3<sup>rd</sup> Annual IBSC Conference, University of Colorado, Boulder, CO.
- January 2011 – Crossing the Basic to Clinical Divide: Results from the *Cognitive Neuroscience Task Reliability & Clinical Applications (CNTRACs) Consortium* Study. Psychiatry Grand Rounds, Washington University, St. Louis, MO.
- March 2011 – Cognitive and Affective Control in Schizophrenia. Harvard Psychology Department Colloquium, Harvard, Boston, MA.
- March 2011 – Cognitive and Affective Control in Schizophrenia. Duke Psychology Department Colloquium, Durham, NC.
- May 2011 – Altered Functional Brain Responses and Connectivity in Preschool Onset Depression. Translational Neuroscience Program Talk Series, University of Pittsburgh Medical School, Pittsburgh, PA.
- May 2011 – Crossing the Basic to Clinical Divide: Results from the *Cognitive Neuroscience Task Reliability & Clinical Applications (CNTRACs) Consortium* Study. University of Pittsburgh Conte Center, Pittsburgh, PA.

- June 2011 – Variety is the Spice of Life: Variability in Cognitive Control Functions. Summer Institute for Cognitive Neuroscience, Santa Barbara, CA.
- June 2011 – Cognitive and Affective Control in Mood Disorders. Summer Institute for Cognitive Neuroscience, Santa Barbara, CA.
- Nov 2011 – Motivation in Schizophrenia. Philosophy, Neuroscience and Psychology Works in Progress Seminar. Washington University in St. Louis. St. Louis, MO.
- Nov 2011 – Crossing the Basic to Clinical Divide: Results from the *Cognitive Neuroscience Task Reliability & Clinical Applications (CNTRACs) Consortium* Study. Pfizer Pharmaceuticals
- Dec 2011 – Altered Functional Brain Responses and Connectivity in Preschool Onset Depression. University Management Team Meeting, Washington University, St. Louis, MO.
- Jan 2012 – Altered Functional Brain Responses and Connectivity in Preschool Onset Depression. Psychiatry Grand Rounds, Washington University in St. Louis. St. Louis, MO.
- Feb 2012 – Motivation, Reward and Brain Function in Schizophrenia. Brain, Behavior and Cognitive Seminar, University of Illinois at Urbana-Champaign, Champaign, IL.
- April 2012 – Motivation, Reward and Brain Function in Schizophrenia. Rushton Symposium, University of Florida at Tallahassee, Tallahassee, FL.
- July 2012 – Episodic Memory in Psychopathology. Summer Institute in Cognitive Neuroscience, Santa Barbara, CA.
- September 2012 – Neural and Psychological Mechanisms of Motivational Impairments in Schizophrenia. Grand Rounds, Yale University School of Medicine, New Haven, CT.
- October 2012 – Motivation, Reward and Brain Function in Schizophrenia. Taylor Lecture, University of Maryland, Maryland Psychiatric Research Center, Baltimore, MD.
- May 2013 – Motivation and Reward Processing in Psychopathology. Mechanisms of Motivation, Cognition, and Aging Interactions Conference (MOMCAI), Washington DC.
- May 2013 – Replicability in Neuroimaging. Association for Psychological Science Conference, Washington DC.
- September 2013 – Motivation, Reward and Brain Function in Schizophrenia. Presidential Address, Society for Research in Psychopathology, Oakland CA.
- September 2013 – Cognitive Control in Schizophrenia. Slovenia Neuroscience Symposium, Ljubljana, Slovenia.
- October 2013 – Cognitive and Affective Control in Schizophrenia. Columbia University Psychology Department Colloquium, New York, NY.

- October 2013 – Reinforcement Learning in Schizophrenia. Reinforcement Learning and Decision Making Conference, Princeton, NJ.
- January 2014 – Neural and Psychological Mechanisms of Motivational Impairments in Schizophrenia. Grand Rounds, Mount Sinai School of School of Medicine, New York, NY.
- January 2014 – Neural and Psychological Mechanisms of Motivational Impairments in Schizophrenia. Grand Rounds, St. Luke’s Rosevelt Hospital, New York, NY.
- January 2014 – The Human Connectome Project. Grand Rounds, Psychiatry Department, Washington University School of Medicine, St. Louis, MO.
- March 2014 – Schizophrenia: Facts and Fiction. Mini Medical School. Washington University School of Medicine, St. Louis, MO.
- April 2014 – Connectivity and Psychopathology. Keynote Symposium. Schizophrenia International Research Society. Florence, Italy.
- April 2014 – Motivation and Cognitive Control in Schizophrenia. Berkeley University Clinical Psychology Colloquium, Berkeley, California.
- May 2014 – Connectivity, RDoC, and Psychopathology. APA/NIMH Symposium. American Psychiatric Association Conference. New York, New York.
- May 2014 – The Future of Psychopathology Research. University of California at San Francisco Research Retreat, San Francisco, California.
- Oct 2014 – Connectomics and Psychopathology, Yale Institute of Living Grand Rounds, Hartford Connecticut.
- Oct 2014 – Neural and Psychological Mechanisms of Motivational Impairments in Psychopathology, Grand Rounds, Long Island Jewish Hospital
- February 2015 – Connectomics and Psychopathology, Keynote Speaker, International Neuropsychological Society Conference, Denver, Colorado
- February 2015 – Connectomics and Psychopathology, Neurology Grant Rounds, St. John’s Hospital, Saint Louis, Missouri.
- April 2015 – Connectomics and Psychopathology, Colloquium Speaker, National Institutes of Health Neuroscience Colloquium, Washington DC
- May 2015 – Connectomics and Psychopathology, Colloquium Speaker, McLean Hospital, Boston, MA.
- June 2015 – Connectomics and Behavior, Colloquium Speaker, Center for Mind and Brain, University of California at Davis, Davis, CA.
- November 2015 – Connectomics and Psychopathology, Colloquium Speaker, Yale MR Center, New Haven, CT.



January 2016 – Connectomics and Psychopathology, Translational Neuroscience Colloquium  
Speaker, Broad Intitution of Harvard and MIT, Boston, MA.

## 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. (Chair and thesis advisor)*

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

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

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

Shefali Brahmhatt (2008). *Functional neuroanatomy of working memory as a risk factor for schizophrenia. (Chair and thesis advisor)*

Aaron Bonner-Jackson (2009). *Associative memory processing in schizophrenia. (Chair and thesis advisor)*

Zainab Delawalla (2009). *Stress reactivity, stress appraisal and coping responses in schizophrenia (Chair and thesis advisor)*

Meghana Karnik (2009). *Genetic effects on structure-function correlations (Chair, but not thesis advisor)*

Jessica Paxton (2009). *Cognitive training for transfer in healthy aging. (Chair and thesis advisor)*

Alicia Vogel (2010). *The developmental functional neuroanatomy of orthographic processing (Chair, but not thesis advisor)*

Alan Anticevic (2010). *Cognitive and Emotion Interactions in Working Memory in Schizophrenia*. (Chair and thesis advisor)

Katie Ihnen (2013). *The development of phonological processing* (Chair, but not thesis advisor)

Erin Dowd (2012). *Reinforcement learning in schizophrenia* (thesis advisor)

Karla Becceril (2013). *Error processing networks in schizophrenia* (thesis advisor)

Kevin Packerham (2014). *The effect of cigarette smoking during acute alcohol intoxication* (co-thesis advisor)

Yu Sun Chung (2014). *Psychological and Neural Mechanisms Integrating Reward and Cognitive Control: Application to Schizophrenia*. (Chair and thesis advisor)

Alan Ceasar (2015). *Basal Ganglia and Updating in Schizophrenia*.

Katherine Luking (2015). *Reward processing in children at risk for depression* (thesis advisor)

David Pagliaccio (2015). *HPA Axis risk genes, stress and psychopathology* (thesis advisor)

Binyam Nardos (present). *MVPA and word processing* (Chair, but not thesis advisor)

Julia Sheffield (present). *Transdiagnostic relationship between functional networks and cognition in psychosis*.

Ashley Nielsen (present). *Neural Mechanisms of Specific Language Impairment* (Chair, but not thesis advisor)

### **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.*

Jessica Church (2008). *Functional Brain Development.*

Hannah Sypher-Locke (2008). *Motivational and personality influences on cognitive control and task performance.*

Steve Nelsen (2009). *Cortical components of retrieval.*

Alex Cohen (2010). *Defining functional regions using resting state connectivity.*

Rebecca Reese (2011). *Patient's perceptions of comorbid depression in patients with heart disease*

Gabe Arajuo (2010). *Response monitoring during typical development*

Kelly Theim (2010). *The nosological status of loss of control over eating in children.*

Pia Banerjee (2012). *Organizational strategic processing: A latent variable approach.*

Cheri Levinson (2013). *Manipulation of Negative Social Evaluative Fears on Body Dissatisfaction and Eating Behaviors: Does Fear of Social Evaluation Lead to Disordered Eating?*

Kim Chiew (2013). *Emotion versus motivation: Probing dissociable influences on cognitive control through task performance and pupillometry methods.*

Alicia Janos (2014). *Relationship between Serum Biomarkers and Three Month Outcomes following Pediatric Traumatic Brain Injury (TBI)*

Rachel Lean (2015). *Cognitive function in premature children*

Michele Eisenberg (present)

Andrew Westbrook (present)

**Doctoral Committee Reader**

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

Sharna Jamadar (2009). *Spatial and temporal dynamics of cognitive control*. (University of Newcastle in Australia, Outside Reader).

Carolyn Wilson (2010). *Inhibitory Control in Schizophrenia*. (University of Waterloo in Canada, Outside Reader).

Rachel Ellis (2014).

### **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*

John Kuelper (2008). *Thought Insertion*.

Gabby Alvarez (2014-2015): *Depression and Cognition*

Kelsey Irwin (2015-2016): *Reward Responsivity in Preschool Depression*

David Suh (2015-2016) *Depression, Rumination and Distractibility*

Zunaira Komal (2015-2016) *Model Based Learning of Loss Avoidance in Psychosis*

Kelsey Irwin (2015-2016) *Reward processing depressed preschoolers*.

### **Mind Brain Undergraduate Students**

Mara Kuns (2000)

Rebecca Oswald (2000)

Eli Zimmerman (2003)

Alana Gold (2004)

Laura Cobb (2006)

Tara Benesch (2007)

Rachel Cohen (2008)

Lauren Perlmutter (2009)

Jonathan Merrill (2010)

Nathan Schoen (2011)

David Suh (2013)

Sepora Makebeth (2014)

Rebecca Kolodner (2014)

Sally Dershowitz (2015)

Julia Ermel (2015)