

Curriculum Vitae  
**Derek M. Smith, Ph.D.**  
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## **Education**

**Temple University** 2007-2011

Philadelphia, Pennsylvania

B.A. Psychology, minors in Cognitive Neuroscience & Economics

**Georgia Institute of Technology** 2013-2016

Atlanta, Georgia

M.S. Psychology

**Georgia Institute of Technology** 2016-2019

Atlanta, Georgia

Ph.D. Psychology (Cognition and Brain Science, minor in Quantitative Methods)

**Northwestern University** 2019-2021

Evanston, Illinois

Postdoctoral Scholar

**Johns Hopkins University – School of Medicine** 2021-Present

Baltimore, Maryland

Research Associate

## **Research Experience**

Undergraduate Research Assistant Fall 2008, Spring 2009 Department of Psychology

Temple University, Philadelphia, PA

Advisor: Dr. Philip Hines

Undergraduate Research Assistant Summer 2010, Spring 2011 Department of Psychology

Temple University, Philadelphia, PA

Advisors: Dr. Jason Chein & Dr. Robert Weisberg

Volunteer Research Assistant Summer 2012, Spring 2013 Department of Psychology

University of the Sciences in Philadelphia, Philadelphia, PA

Advisor: Dr. Stephen Moelter

Graduate Research Assistant Summer 2013, Spring 2019 School of Psychology

Georgia Institute of Technology, Atlanta GA

Advisor: Dr. Eric Schumacher

Postdoctoral Researcher Spring 2019, Fall 2021 Department of Psychology

Northwestern University, Evanston, Illinois

Advisor: Dr. Caterina Gratton

## **Publications**

Schumacher, E. H., Cookson, S. L., **Smith, D. M.**, Nguyen, T. V., Sultan, Z., Reuben, K. E., & Hazeltine, E. (2018). Dual-task processing with identical stimulus and response sets: assessing the importance of task representation in dual-task interference. *Frontiers in Psychology*, 9.

**Smith, D. M.**, Zhao, Y., Keilholz, S. D., & Schumacher, E. H. (2018). Investigating the intersession reliability of dynamic brain-state properties. *Brain Connectivity*, 8(5), 255-267.

Bezdek, M. A., Godwin, C. A., **Smith, D.M.**, Hazeltine E., Schumacher, E. H. (2019). How conscious and unconscious aspects of task representations affect dynamic behavior in complex situations. *Psychology of Consciousness: Theory, Research, and Practice*

Hao, Y., Yao, L., **Smith, D.M.**, Sorel, E., Anderson, A.K., Schumacher, E.H., & Evans G.W. (2019). Prefrontal-posterior coupling mediates transitions between emotional states and influences executive functioning. *Scientific Reports*, 9(1), 8252.

**Smith, D. M.**, Dykstra, T., Hazeltine, E., & Schumacher, E. H. (2020). Task representation affects the boundaries of behavioral slowing following an error. *Attention, Perception, & Psychophysics*, 1-12.

Gratton, C., **Smith, D. M.**, & Dorn, M. (2020). Digging deeper to chart the landscape of human brain development. *Neuron*, 106(2), 209-211.

**Smith, D. M.**, Perez, D. C., Porter, A., Dworetzky, A., & Gratton, C. (2021). Light through the fog: using precision fMRI data to disentangle the neural substrates of cognitive control. *Current Opinion in Behavioral Sciences*, 40, 19-26.

Dykstra, T., **Smith, D.M.**, Schumacher, E.H., & Hazeltine, E. (*in press*). Measuring task structure with transitional response times: Task representations are more than task sets. *Psychonomic Bulletin & Review*.

**Smith, D.M.**, & Terhune D.B. (*in press*). Pedunculopontine-induced cortical decoupling as the neurophysiological locus of dissociation. *Psychological Review*.

## **Preprints**

Dworetzky, A., Seitzman, B. A., Adeyemo, B., **Smith, D. M.**, Petersen, S. E., & Gratton, C. (2021). Two common and distinct forms of variation in human functional brain networks. bioRxiv.

Ladwig, Z., Seitzman, B.A., Dworetzky, A., Yu, Y., Adeyemo, B., **Smith, D.M.**, Petersen, S.E., Gratton C. (2022). BOLD co-fluctuation 'events' are predicted from static functional connectivity. bioRxiv.

**Smith, D. M.**, Kraus, B. T., Dworetzky, A., Gordon, E. M., & Gratton, C. (2021). Brain hubs defined in the group do not overlap with regions of high inter-individual variability. bioRxiv.

## **Manuscripts in Preparation**

Yu, Y., Gratton, C., **Smith, D.M.** (*in prep*). From correlation to communication.

## **Poster Presentations**

**Smith, D.M.**, Godwin, C.A., Grooms, J.K., Keilholz, S.D., & Schumacher, E.H. (2015, March). Network dynamics of cognitive control. Cognitive Neuroscience Society, San Francisco, CA.

Godwin, C.A., Grooms, J.K., **Smith, D.M.**, Keilholz, S.D., & Schumacher, E.H. (2015, March). Dynamics of memory encoding: Large-scale brain network fluctuations during prestimulus time windows. Cognitive Neuroscience Society, San Francisco, CA.

**Smith, D.M.**, Zhao, Y., Godwin, C.A., Grooms, J.K., Yousefi, B., Keilholz, S.D., & Schumacher, E.H. (2016, April). Dynamic network connectivity and cognitive control. Cognitive Neuroscience Society, New York, NY.

**Smith, D.M.**, Zhao, Y., Yousefi, B., Keilholz, S.D., & Schumacher, E.H. (2017, March). The reliability of brain state properties. Cognitive Neuroscience Society, San Francisco, CA.

Abbas, A., **Smith D.M.**, Schumacher E., & Keilholz S. (2017, June). Quasiperiodic patterns in the brain contribute to functional connectivity in the default mode Network. Organization for Human Brain Mapping, Vancouver, BC.

**Smith, D.M.**, & Schumacher E.H. (2018, March). Activation and connectivity at the decision and execution phases of a voluntary task switching paradigm. Cognitive Neuroscience Society, Boston, MA.

Yousefi, B., **Smith D.M.**, Schumacher E., & Keilholz S. (2018, March). Quasi-periodic patterns of intrinsic brain activity: stability and individual-specificity. Cognitive Neuroscience Society, Boston, MA.

Hao, Y., Yao, L., **Smith, D.M.**, Sorel, E., Anderson, A.K., Schumacher, E.H., Evans, G.W. (2018, November). Neural instantiation of regulatory processes for dynamic emotional stimuli. Society for Neuroscience, San Diego, CA.

**Smith, D.M.**, Dykstra, T., Hazeltine, E., Schumacher, E.H. (2018, November). Task files, post error slowing, & the flexible boundaries of cognitive control. Psychonomic Society, New Orleans, LA.

**Smith, D.M.**, Brown, T.I., Schumacher, E.H. (2020 May). Network coupling & congruency status. Cognitive Neuroscience Society, Virtual Meeting.

**Smith, D.M.**, Kraus, B.T., Dworetzky, A., Gordon, E.M., Gratton C. (2021, March). Inter-individual variation in connector hubs. Cognitive Neuroscience Society, Virtual Meeting.

Yu, Y., **Smith, D.M.**, Gratton, C. (2021, June). From correlation to communication: decomposing functional connectivity changes. Organization for Human Brain Mapping, Virtual Meeting.

Xu N., **Smith, D.M.**, Jenó, G., Seeburger, D.T., Schumacher, E.H., Keilholz, S.D. (2021, June). Quasi-periodic patterns and BOLD response entrained by visual stimulation in the human brain. Organization for Human Brain Mapping, Virtual Meeting.

**Smith, D.M.**, Kraus, B.T., Dworetzky, A., Gordon, E.M., Gratton, C. (2021, November). Bridges or mirages connector hubs and inter-subject variation in connectivity profiles. Society for Neuroscience, Virtual Meeting.

### **Conference Presentations**

Reliability and Intra-Individual Variability of Congruency Effects. (May 2021). A Bunch of Control Datablitzes (ABCD)

### **Teaching Experience**

Teaching Assistant (Grading): Sensation and Perception	Fall 2015
Teaching Assistant (Grading): Cognitive Psychology	Spring 2017
Teaching Practicum	Spring 2017
Lab Instructor & Experiment Supervisor: Psychology Capstone	Spring 2018
Guest Lecturer: Brain Bases of Self-Control	Fall 2019
AFNI Task Analysis Tutorials: fMRI Analysis and Methods	Spring 2021

### **Manuscript Reviewer (dates vary)**

Behavioral Research Methods  
Frontiers in Psychology  
Network Neuroscience  
NeuroImage

### **Awards**

Neuroscience of Human Cognition T32 (T32NS047987)	2020-2021
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### **Professional Memberships**

Cognitive Neuroscience Society	2014-Present
Psychonomic Society	2015-Present
Society for Neuroscience	2019-Present

### **Skills**

AFNI, E-Basic (E-Prime), EQS, GIFT, Inquisit, IRTPRO, MATLAB, Microsoft Office, R, SPSS

### **Fields of Interest**

Cognitive Control  
Consciousness  
Cingulo-Opercular Network  
Individual Differences in Cognitive Abilities  
Sleep-Wake Cycles & Individual Differences in Cognition  
Predictive Coding  
Dynamic Functional Connectivity  
Metacognition