

Kara Abad Dyckman, Ph.D.

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EDUCATION

- August 2007 Doctor of Philosophy
 University of Georgia, Athens, Georgia
 Department of Psychology, Cognitive/Experimental Program
 fMRI/EEG study of changes in behavior and brain activity during and after saccade practice
 Advisors: Jennifer E. McDowell, Ph.D., Brett A. Clementz, Ph.D.
- May 2005 Master of Science
 University of Georgia, Athens, Georgia
 Department of Psychology, Cognitive/Experimental Program
 Neural plasticity of saccade-related brain regions following repeated exposure to eye movement tasks
 Advisor: Jennifer E. McDowell, Ph.D.
- May 1996 Bachelor of Arts
 Bucknell University, Lewisburg, Pennsylvania
 Major: Psychology
 Major GPA: 3.7

POSITIONS HELD

- 08/12-present Lecturer, Department of Psychology, University of Georgia
Undergraduate Courses taught: Introduction to Psychology (including Honors), Cognitive Psychology, Lab in Brain Imaging, Seminar on Neurological Disorders
Graduate Courses taught: Cognitive Psychology, Biological Foundations of Behavior
- 08/10–08/12 Temporary Assistant Professor, Department of Psychology, University of Georgia
Undergraduate Courses taught: Cognitive Psychology, Lab in Brain Imaging
Graduate Courses taught: Cognitive Psychology, Neuroanatomy
- 09/07-07/10 Postdoctoral Research Fellow, Psychiatric Neuroimaging, Mass General Hospital
 Advisor: Dara Manoach, Ph.D.

COURSES DESIGNED

Lab in Brain Imaging

This course was designed to give undergraduates an introduction to brain imaging and the practical aspects of conducting brain imaging research. The University of Georgia is fortunate to have three different technologies regularly used for research on the brain: fMRI, MEG, and EEG. The course begins with a series of lectures on the basic principles underlying the signals measured using MRI/fMRI, EEG, and MEG. Journal articles and animations are used to supplement the lectures. The second half of the course is devoted to data collection at the BioImaging Research Center (BIRC) using the different imaging technologies. All students learn about study design, observe data collection, and have the

opportunity to be a participant in one of the studies. Students complete a final project that showcases what they have learned in the class. Examples of final projects have been: research posters, a children's book about a neuron, and a guide for people who are scheduled to have an EEG.

For this course, I worked with a student in the Department of Dramatic Arts and Media to create animations of how the fMRI signal is generated and recorded and concepts that are typically difficult to explain via PowerPoint and lecture (Please see <http://vimeo.com/42844813> for an example).

Seminar in Neurological Disorders

This course was designed to provide students with a basic understanding of how the brain works and what impact different neurological disorders have on the brain and behavior. Students typically have heard about disorders such as Alzheimer's Disease and Parkinson's Disease, and they have heard about concussions or even had one themselves; however, they usually do not know what is happening to the brain in each of these cases and how what is going on in the brain is affecting behavior. Topics covered include: Tumors, Seizure Disorders, Strokes, Disorders of Development, and Degenerative Disorders. For each topic, we discuss the biological bases, symptomatology, current treatment options, and current research. Each topic includes one or more case studies, which allows the students to better understand how each disorder affects all aspects of a person's life. Finally, I try to include an experiential component. I have formed a relationship with Athens Neurological Associates, and they allow us to come to their Grand Rounds to hear medical students discuss interesting neurological cases they have encountered. This past semester, we formed a team to walk and raise money for MS research.

GRANT SUPPORT

08/08-07/10 NIMH - Ruth L. Kirschstein National Research Service Award (NRSA) – Individual Postdoctoral Fellowship. "Spatiotemporal dynamics of abnormal saccadic inhibition in schizophrenia"

HONORS AND AWARDS

05/17 Outstanding Teaching Award, Behavior and Brain Sciences Program, Department of Psychology

12/14-12/15 2015 CTL Fellow for Innovative Teaching – Yearlong faculty development opportunity, resulting in a "flipped classroom" for Fall 2015. - \$2,000 for classroom support.

08/06-05/07 Achievement Rewards for College Scientists (ARCS) Foundation Scholar - \$3,000 stipend per semester

06/06 Acceptance to 2006 John Merck Fund Summer Institute on the Biology of Developmental Disabilities - Funding for tuition, meals, and housing, plus a travel stipend of \$200

08/05-06/06 Paul D. Coverdell Neuroimaging Program Franklin Foundation Travel Award (\$2,000)

08/04-06/05 Paul D. Coverdell Neuroimaging Program Franklin Foundation Scholar – Tuition and stipend for 2004-2005 academic year plus \$5,000 for fMRI research and \$1,000 for travel.

08/04-05/05 American Psychological Foundation Graduate Research Scholarship (APF/COGDOP) – \$1,000 for research

SERVICE

Fall 2012-present BBS (Behavioral and Brain Sciences) Proseminar
The BBS Proseminar is a requirement for 1st and 2nd year graduate students in the BBS program. The intent of this proseminar is to introduce new graduate students to the research being conducted by faculty in the program. To this end, I facilitate research talks by faculty and more senior graduate students in the program. Over the past few years, it

has become evident that the graduate students are also looking for professional development. To meet this demand, I have arranged talks about teaching by speakers from the Center for Teaching and Learning, grant-writing and manuscript preparation by senior faculty members, jobs in industry by program alumni, and informal question and answer sessions with current graduate students.

- Fall 2016–present Local School Governance Team Co-Chair, Chase Street Elementary School, Clarke County School District, Athens, GA
LSGTs exercise school-level governance by helping to set the long-term direction of their school as well as to design and implement school-level innovations that are responsive to their local school and community needs.
- Fall 2016 Michael Kernis Award for best first-year graduate student presentation, Judge
- Spring 2017 Excellence in Teaching Award, Psychology Department nomination committee
- Fall 2015 Neuroscience Lecturer, search committee

PROFESSIONAL ACTIVITIES

Professional Affiliations

Cognitive Neuroscience Society
Society for Neuroscience
American Psychological Association, Division 2 (Society for the Teaching of Psychology)

Professional Development

- Spring 2016 National Institute on the Teaching of Psychology (NITOP) – Conference Participant
- 2014-2015 CTL Fellows for Innovative Teaching Program
This year-long program provided faculty with support and collaboration to institute robust “flipped” pedagogical approaches in their courses. Activities included: Large-Group workshops, small group sessions, 1-on-1 mentoring sessions, and peer-observations of teaching.
- 2013-2014 Faculty Learning Community – Non tenure-track faculty
This FLC provided a community to discuss issues unique to our roles across the university. Topics of discussion included appointment and promotion guidelines, balancing multiple departmental roles, actively engaging students and other teaching issues. The goal was to learn from each other to improve our teaching and service to the university.

INVITED PRESENTATIONS

- Oct 2016 Psychology Educator Development Association (PEDA), University of Georgia
Flipped Classroom 2: Where are they now? Insights, Tips, and Challenges after 2 semesters using a flipped classroom.
- Sept 2015 Psychology Educator Development Association (PEDA), University of Georgia
Flipped Classroom – What is it? How does it work?

SELECTED PUBLICATIONS

- Rodrigue, A. L., Austin, B. P., **Dyckman, K. A.**, & McDowell, J. E. (2016). Brain activation differences in schizophrenia during context-dependent processing of saccade tasks. *Behavioral and Brain Functions*, 12, 9 pages.
- Manoach, D. S., Lee, A. K., Hämäläinen, M. S., **Dyckman, K. A.**, Friedman, J. S., Vangel, M., Goff, D. C., & Barton, J. J. (2013). Anomalous use of context during task preparation in schizophrenia: a

magnetoencephalography study. *Biological Psychiatry*, 73, 967-75.

- Hamm, J. P., **Dyckman, K. A.**, McDowell, J. E., & Clementz, B. A. (2012). Pre-cue fronto-occipital alpha phase and distributed cortical oscillations predict failures of cognitive control. *J Neurosci*, 32, 7034-41.
- Lee, J., Park, C., **Dyckman, K. A.**, Lazar, N. A., Austin, B. P., Li, Q., & McDowell, J. E. (2012). Practice-related changes in neural activation patterns investigated via wavelet-based clustering analysis. *Human Brain Mapping*.
- Krafft, C. E., Schwarz, N. F., Chi, L., Li, Q., Schaeffer, D. J., Rodrigue, A. L., Pierce, J. E., **Dyckman, K. A.**, & McDowell, J. E. (2012). The location and function of parietal cortex supporting reflexive and complex saccades, A meta-analysis of a decade of functional MRI data. *Horizons in Neuroscience Research* (volume 9).
- Dyckman, K. A.**, Lee, A. K. C., Agam, Y., Goff, D. C., Barton, J. J. S., & Manoach, D. S. (2011). Abnormally persistent fMRI activation in schizophrenia: a neural correlate of perseveration. *Schizophrenia Research*, 132, 62-8.
- Roffman J. L., Brohawn D. G., Friedman J. S., **Dyckman K. A.**, Thakkar K. N., Agam Y., Vangel, M. G., Goff D. C., Manoach D.S. (2011). MTHFR 677C>T effects on anterior cingulate structure and function during response monitoring in schizophrenia: a preliminary study. *Brain Imaging Behav*, 5, 65-75.
- Hamm, J. P., **Dyckman, K. A.**, Ethridge, L. E., McDowell, J. E., Clementz, B. A. (2010). Preparatory activations across a distributed cortical network determine production of express saccades in humans. *Journal of Neuroscience*, 30, 7350-7.
- Tu, P, Buckner, R. L., Zollei, L., **Dyckman, K. A.**, Goff, D. C. & Manoach, D. S. (2010). Reduced functional connectivity in a right-hemisphere network for volitional ocular motor control in schizophrenia. *Brain*, 133, 625-37
- McDowell, J. E., **Dyckman, K. A.**, Austin, B. P., & Clementz, B. A. (2008). Neurophysiology and neuroanatomy of reflexive and volitional saccades: Evidence from studies of humans. *Brain & Cognition – Special Issue: Eye Movements in Psychiatric Research*, 68, 255-270.
- Dyckman, K. A.**, Camchong, J., Clementz, B. A., & McDowell, J. E. (2007). An effect of context on saccade-related behavior and brain activity. *NeuroImage*, 36, 774-784.
- Dyckman, K. A.**, & McDowell, J. E. (2005). Behavioral plasticity of antisaccade performance following daily practice. *Experimental Brain Research*, 162, 63-69.
- McDowell, J. E., Kissler, J. M., Berg, P., **Dyckman, K. A.**, Gao, Y., Rockstroh, B., & Clementz, B. A. (2005). Electroencephalography/magnetoencephalography study of cortical activities preceding prosaccades and antisaccades. *NeuroReport*, 16, 663-668.

SELECTED CONFERENCE PRESENTATIONS

- Rodrigue, A., Austin, B., Chi, L., Pierce, J., Krafft, C., Li, Q., **Dyckman, K.**, & McDowell, J. *Biological Psychiatry* (2013): The effect of practice on brain activation during context dependent processing in schizophrenia.
- Krafft, C., Pierce, J., Rodrigue, A., Schwarz, N., Chi, L., Weinberger, A., **Dyckman, K.**, Miller, P., Tomporowski, P., Yanasak, N., Allison, J., Davis, C. L., & McDowell, J. E. Obesity, fitness, and cortical thickness in children. Poster presentation at the Organization for Human Brain Mapping conference, Beijing, China, June 10-14, 2012.
- Chi, L., Austin, B., Krafft, C., Li, Q., Rodrigue, A., Pierce, J., **Dyckman, K.**, & McDowell, J. E. Practice-induced neural plasticity in schizophrenia. Poster presentation at the Organization for Human

Brain Mapping conference, Beijing, China, June 10-14, 2012.

- Hamm, J. P., **Dyckman, K. A.**, McDowell, J. E., & Clementz, B. A. Pre-trial alpha phase in frontal cortex predicts correct vs. incorrect antisaccade performance. Poster presentation at the Society of Psychophysiological Research conference, Boston, MA, September 14-18, 2011.
- Schaeffer, D. J., Amlung, M. T., Li, Q., Krafft, C. E., Austin, B. P., **Dyckman, K. A.**, & McDowell, J. E. Brain activation patterns differentiating correct and incorrect anti-saccade performance. Poster presentation at the Society of Psychophysiological Research conference, Boston, MA, September 14-18, 2011.
- Manoach, D. S., **Dyckman, K. A.**, Agam, Y., Isom, M., Joseph, R. M., & Goff, D. C. Distinct neural signatures of response monitoring deficits in schizophrenia and autism: a neurocognitive endophenotype? Slide presentation at the International Congress on Schizophrenia Research, San Diego, CA, March 28-April 1, 2009.
- Dyckman, K. A.**, Young, J. C., Goff, D. C., Barton, J. J. S., & Manoach, D.S. Compensatory hyperactivation of frontal eye field supports correct antisaccade performance in schizophrenia. Slide presentation at the Society for Neuroscience conference, Washington, DC, November 15-19, 2008.
- Dyckman, K. A.**, Camchong, J., Clementz, B. A., & McDowell, J. E. An effect of context on saccade-related behavior and brain activity. Poster presented at the Annual Meeting of Cognitive Neuroscience Society, New York, May 5-7, 2007.
- Dyckman, K. A.**, McDowell, J. E., Camchong, J., & Yanasak, N. Plasticity of saccade-related brain circuitry following repeated exposure to eye movement tasks. Slide presentation at the Society for Neuroscience conference, Atlanta, Georgia, October, 2006.
- Dyckman, K. A.**, & McDowell, J. E. Behavioral plasticity of antisaccade performance in young adults following daily practice. Poster presented at the International Congress on Schizophrenia Research, Savannah, Georgia, April 2-6, 2005.
- Camchong, J., **Dyckman, K. A.**, Buckley, P. F., & McDowell, J. E. Neural circuitry activity associated with ocular motor delayed response task performance in normal and schizophrenia subjects. Poster presented at the International Congress on Schizophrenia Research, Savannah, Georgia, April 2-6, 2005.
- Dyckman, K. A.**, & McDowell, J. E. Behavioral plasticity of antisaccade performance in young adults following daily practice. Paper presented at the 27th Annual Psi Chi Convention, UGA, Athens, Georgia, March, 2004.