

Cynthia E. Krafft, PhD

Contact Information

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Education

- In progress Professional M.S., University of Washington
Computer Science
- 2014-2015 Courses towards M.S., San Jose State University
Computer Science
- 2013 Ph.D., University of Georgia
Psychology
Dissertation: Effects of an Eight-Month Randomized Controlled Exercise Intervention in Children's Brain Structure and Function
- 2010 M.S., University of Georgia
Cognitive/Experimental Psychology
Thesis: The Effect of Exercise on Executive Control in Overweight Children
- 2008 B.S., University of South Carolina, Magna Cum Laude
Experimental Psychology

Experience

- 2016 – Research Developer II, Arivale Inc.
- 2015 – 2016 Software Engineer, Castlight Health
- 2015 – 2015 Software Engineer, Striv
- 2013 – 2014 Postdoctoral Scholar, UC Davis MIND Institute
- 2008 – 2013 Graduate Research Assistant, University of Georgia
- 2006 – 2008 Research Assistant, WJB Dorn VAMC

Awards and Honors

- 2010-2013 National Science Foundation Graduate Research Fellowship Award
\$30,000 stipend per year for three years, along with research and travel funds.
- 2013 UGA Psychology Department Charles D. Smock Award
Most promising senior developmental psychology graduate student.

- 2012 Neuroscience 2012 “Hot Topic”
Poster entitled “Alterations in brain activation in overweight children in an 8-month exercise intervention” was named a Hot Topic – information was distributed to the media via an online database and Neuroscience 2012’s on-site press room.
- 2012 UCLA Advanced Neuroimaging Summer Program (Los Angeles, CA)
A two-week training course in advanced MRI methods (competitive admission, funded by the NIH).
- 2012 Franklin Foundation Travel Award
Travel funding to present research at Neuroscience 2012 in New Orleans, LA.
- 2012 XSEDE Startup Award
High-performance computing resources granted by the Extreme Science and Engineering Discovery Environment (XSEDE), which is supported by the NSF.
- 2011 Training Course in fMRI, University of Michigan (Ann Arbor, MI)
A two-week training course in SPM-based fMRI methods (competitive admission, funded by the NIH).
- 2011 Franklin Foundation Travel Award
Travel funding to present research at Neuroscience 2011 in Washington, D.C.
- 2011 NSF GRFP Travel Allowance
Travel funding to attend the M-BIC fMRI workshop at the Maastricht Brain Imaging Center (Maastricht, The Netherlands).
- 2009 Franklin Foundation Travel Award
Travel funding to attend an AFNI fMRI training workshop in San Diego, CA.
- 2009 NSF Graduate Research Fellowship Honorable Mention
- 2007 USC Magellan Scholar
Funding for a research project entitled “Neural Activity in the Prefrontal Cortex During Response Expression and Inhibition.” Selection was based on the project’s educational and intellectual merit, the potential impact of the project, and my academic success.

Publications

Schwarz NF, **Krafft CE**, Chi L, Weinberger AL, Schaeffer DJ, Pierce JE, Rodrigue AL, Williams CF, DiBattisto CH, Maria BL, Davis CL & McDowell JE (In press). Antisaccade-related brain activation in children with attention-deficit/hyperactivity disorder - A pilot study. *Psychiatry Research*.

Hartanto TA, **Krafft CE**, Iosif AM & Schweitzer JB. (In press). A trial-by-trial analysis reveals more intense physical activity is associated with better cognitive control performance in attention-deficit/hyperactivity disorder. *Child Neuropsychology*.

Bustamante EE, **Krafft CE**, Schaeffer DJ, McDowell JE & Davis CL. (In press). The chronic exercise-cognition effect in overweight and obese children. In T. McMorris (Ed.), *Exercise-Cognition Interaction: Neuroscience Perspectives*. New York: Elsevier.

Fassbender C, **Krafft CE** & Schweitzer JB. (2015). Differentiating SCT and inattentive symptoms of ADHD using fMRI measures of cognitive control. *NeuroImage: Clinical*, 8: 390-397.

Chi L, Schaeffer DJ, **Krafft CE**, Li Q, Schwarz NF & McDowell JE. (2015). Individual differences in working memory moderate the relationship between prosaccade latency and antisaccade error rate. *Psychophysiology*, 52(4): 605-608.

Krafft CE, Schaeffer DJ, Schwarz NF, Chi L, Weinberger AL, Pierce JE, Rodrigue AL, Allison JD, Yanasak NE, Liu T, Davis CL & McDowell JE. (2014). Improved fronto-parietal white matter integrity in overweight children is associated with attendance in an after-school exercise program. *Developmental Neuroscience*, 36(1): 1-9.

Krafft CE, Pierce JE, Schwarz NF, Chi L, Weinberger AL, Schaeffer DJ, Rodrigue AL, Yanasak NE, Davis CL & McDowell JE. (2014). An eight month exercise intervention alters resting state synchrony in overweight children. *Neuroscience*, 256, 445-455.

Krafft CE, Schwarz NF, Chi L, Weinberger AL, Schaeffer DJ, Pierce JE, Rodrigue AL, Yanasak NE, Miller PH, Tomporowski PD, Davis CL & McDowell JE. (2014). An eight month randomized controlled exercise trial alters brain activation during cognitive tasks in overweight children. *Obesity*, 22(1), 232-242.

Pierce JE, **Krafft CE**, Rodrigue AL, Bobilev AM, Lauderdale JD & McDowell JE. (2014). Increased functional connectivity in intrinsic neural networks in individuals with aniridia. *Frontiers in Human Neuroscience*, 8: 1013.

Schaeffer DJ, **Krafft CE**, Schwarz NF, Chi L, Rodrigue AL, Pierce JE, Allison JD, Yanasak NE, Liu T, Davis CL & McDowell JE. (2014). An 8-month exercise intervention alters frontotemporal white matter integrity in overweight children. *Psychophysiology*, 51: 728-733.

Schaeffer DJ, **Krafft CE**, Schwarz NF, Chi L, Rodrigue AL, Pierce JE, Allison JD, Yanasak NF, Liu T, Davis CL & McDowell JE. (2014). The relationship between uncinate fasciculus white matter integrity and verbal memory proficiency in children. *NeuroReport*, 25, 921-925.

Schaeffer DJ, Amlung MT, Li Q, **Krafft CE**, Austin BP, Dyckman KA & McDowell JE. (2013). Neural correlates of behavioral variation in healthy adults' antisaccade performance. *Psychophysiology*, 50, 325-333.

Krafft CE, Schwarz NF, Chi L, Li Q, Schaeffer DJ, Rodrigue AL, Pierce JE, Dyckman KA & McDowell JE. (2012). The location and function of parietal cortex supporting of reflexive and volitional saccades, a meta-analysis of over a decade of functional MRI data. In A. Costa & E. Villalba (Eds.), *Horizons in Neuroscience Research* (Vol. 9). Hauppauge, NY: Nova Science Publishers.

Sabatinelli D, Fortune EE, Li Q, Siddiqui A, **Krafft C**, Oliver W, Beck S & Jeffries J. (2011). Emotional perception: meta-analyses of face and natural scene processing. *Neuroimage*, 54(3): 2524-2533.

Manuscripts in Preparation

Krafft CE, Fassbender C, Hawes D., van den Bos W, Hinshaw S, Guyer A, McClure S & Schweitzer J. Gender differences in neural responses to monetary reward during adolescence.

Krafft CE, Waller JL, Bustamante EE, Zhu H, Pollock NK, Looney J, Williams C, McDowell JE & Davis CL. Cognitive benefits of exercise vary by COMT genotype and sex in overweight children: a randomized controlled trial.

Weissman D, Schriber R, Fassbender C, **Krafft C**, Robins R, Conger R, Hastings P & Guyer A. Nucleus accumbens-based resting state connectivity networks in adolescent substance use.

Posters and Conference Presentations

Rutledge K, **Krafft C**, Hartanto T, Calfee E, Dixon J, Fassbender C, McClure S, Schweitzer J & Pakyurek M. Impulsivity and working memory relationships within ADHD. Poster presented 10/14 at AACAP, San Diego, CA.

Krafft C, Schaeffer D, Schwarz N, Chi L, Weinberger A, Pierce J, Rodrigue A, Allison J, Yanasak N, Liu T, Davis C & McDowell J. Attendance in an after-school exercise program predicts improved fronto-parietal white matter integrity in overweight children. Poster presented 11/13 at ObesityWeek, Atlanta, GA.

Chi L, **Krafft C**, Li Q, Schwarz N, Schaeffer D & McDowell J. Individual differences in working memory moderate the relationship between prosaccade latency and antisaccade error rate. Poster presented 10/13 at the Society for Psychophysiological Research Annual Meeting, Florence, Italy.

Chi L, Austin B, **Krafft C**, Li Q, Rodrigue A, Dyckman K & McDowell J. Efficiency measures in schizophrenia suggest differential speed-accuracy trade-off during saccade performance. Poster presented 5/13 at the Society of Biological Psychiatry Annual Meeting, San Francisco, CA.

Rodrigue A, Austin B, Chi L, Pierce J, **Krafft C**, Li Q, Dyckman K & McDowell J. The effect of practice on brain activation during context dependent processing in schizophrenia. Poster presented 5/13 at the Society of Biological Psychiatry Annual Meeting, San Francisco, CA.

Krafft C, Weinberger A, Schwarz N, Chi L, Schaeffer D, Pierce J, Rodrigue A, Davis C & McDowell J. An eight month exercise intervention alters brain activation during cognitive control in overweight children. Poster presented 4/13 at the Cognitive Neuroscience Society Annual Meeting, San Francisco, CA.

Pierce J, Rodrigue A, **Krafft C**, Bobliev A, Lauderdale J, & McDowell J. Differences in functional connectivity during resting state fMRI in individuals with aniridia. Poster presented 4/13 at the Cognitive Neuroscience Society Annual Meeting, San Francisco, CA.

Krafft C, Weinberger A, Schwarz N, Chi L, Schaeffer D, Pierce J, Rodrigue A, Allison J, Yanasak N, Miller P, Tomporowski P, Davis C & McDowell J. An eight-month exercise intervention alters brain activation in overweight children. Poster presented 10/12 at Neuroscience 2012, New Orleans, LA.

Chi L, **Krafft C**, Schwarz N, Li Q, Schaeffer D, Rodrigue A, Pierce J, Dyckman K & McDowell J. Common and distinct functional regions of neural circuitry supporting reflexive and volitional saccades (a meta-analysis of functional MRI data). Poster presented 10/12 at Neuroscience 2012, New Orleans, LA.

Pierce J, **Krafft C**, Rodrigue A, Schaeffer D, Chi L, Schwarz N, Allison J, Yanasak N, Miller P, Tomporowski P, Davis C & McDowell J. Associations of cortical thickness and subcortical volume with measures of cognitive performance in overweight children. Poster presented 10/12 at Neuroscience 2012, New Orleans, LA.

Schwarz N, **Krafft C**, Chi L, Pierce J, Rodrigue A, Weinberger A, Miller P, Tomporowski P, Yanasak N, Allison J, DiBattisto C, Maria B, Davis C & McDowell J. Neural correlates of cognitive control and behavior in a sample of children with ADHD. Poster presented 10/12 at Neuroscience 2012, New Orleans, LA.

Rodrigue A, Austin B, Chi L, Pierce J, **Krafft C**, Li Q, Dyckman K & McDowell J. Brain activation differences in individuals with schizophrenia during context dependent processing of cognitive control tasks. Poster presented 10/12 at Neuroscience 2012, New Orleans, LA.

Ethridge L, Reilly J, McDowell J, Clementz B, Frankovich K, **Krafft C**, Pierce J, Keshavan M, Pearlson G, Tamminga C, Thaker G & Sweeney J. Poor antisaccade performance in schizophrenia related to speed of visual orienting: a cluster analysis. Poster presented 10/12 at Neuroscience 2012, New Orleans, LA.

Schaeffer D, **Krafft C**, Schwarz N, Chi L, Rodrigue A, Pierce J, Allison J, Yanasak N, Liu T, Davis C & McDowell J. The relationship between white matter diffusivity in uncinate fasciculus and verbal memory proficiency in overweight and obese children. Poster presented 9/12 at Society for Psychophysiological Research Meeting, New Orleans, LA.

Davis C, Tomporowski P, McDowell J, Miller P & **Krafft C**. Childhood obesity from exercise to parents: what research and practice can teach us. Symposium 8/12 at the American Psychological Association's Annual Convention, Orlando, FL.

Weinberger A, **Krafft C**, Miller P, Tomporowski P, Davis C & McDowell J. Aerobic fitness is associated with intra-individual variability in reaction time. Poster presented 8/12 at the American Psychological Association's Annual Convention, Orlando, FL.

Krafft C, Pierce J, Rodrigue A, Schwarz N, Chi L, Weinberger A, Dyckman K, Miller P, Tomporowski P, Yanasak N, Allison J, Davis C & McDowell J. Obesity, fitness, and cortical thickness in children. Poster presented 6/12 at the Meeting of the Organization for Human Brain Mapping, Beijing, China.

Chi L, Austin B, **Krafft C**, Li Q, Rodrigue A, Dyckman K & McDowell J. An fMRI study on practice-induced neural plasticity in schizophrenia. Poster presented 6/12 at the Meeting of the Organization for Human Brain Mapping, Beijing, China.

Krafft C, Austin B, Li Q, Weinberger A, Dyckman K, Miller P, Tomporowski P, McDowell J & Davis C. Obesity, fitness, and cognition in children. Poster presented 4/12 at the Cognitive Neuroscience Society Meeting, Chicago, IL.

Krafft C, Austin B, Dyckman K, Li Q, Miller P, Tomporowski P, Yanasak N, Allison J, McDowell J & Davis C. Effects of chronic exercise on neural activation in overweight and sedentary children. Poster presented 11/11 at Neuroscience 2011, Washington, D.C.

Schaeffer D, Amlung M, Li Q, **Krafft C**, Austin B, Dyckman K & McDowell J. Brain activation patterns differentiating correct and incorrect anti-saccade performance. Poster presented 09/11 at the Society for Physiological Research Meeting, Boston, MA.

Krafft C. Cognition in Aniridia. Talk 07/11 at the Aniridia Foundation International Medical Conference, Athens, GA.

Krafft C, Davis C, Austin B, Tomporowski P, Miller P & McDowell J. The effect of exercise on executive control in overweight children. Continually updated data presented:

04/09 at the GA/SC Regional Neuroscience Meeting, Athens, GA.

07/09 at the UGA Graduate Students and Post-docs in Science Interdisciplinary Research Day, Athens, GA.

03/10 at Southeast Nerve Net and Georgia/South Carolina Neuroscience Consortium, Atlanta, GA.

Powell D, **Krafft C** & Oswald B. Neural activity in the prefrontal cortex during trace heart rate and eyeblink classical conditioning. Presented 11/07 at Neuroscience 2007, San Diego, CA.

Additional Technical Training

2012 AFNI Bootcamp (Bethesda, MD)

A one-week training course in AFNI-based fMRI methods.

2011 M-BIC fMRI workshop, Maastricht Brain Imaging Center (Maastricht, The Netherlands)

A one-week training course in BrainVoyager-based fMRI methods.

2009 AFNI fMRI Training Workshop, UCSD (San Diego, CA)

A one-week training course in AFNI-based fMRI methods.

Teaching Experience

2011 **Instructor**, University of Georgia

Psychology 1101 – Elementary Psychology (Fall 2011). 40 students.

- Average teaching evaluation scores (1 = strongly disagree, 5 = strongly agree):
 - Instructor has thorough knowledge of subject: 4.33
 - Instructor is well organized: 4.57
 - Instructor treated students with respect: 4.73
 - Assignments were useful: 4.13
 - Instructor presented material in an understandable way: 4.47
 - I was challenged in this course: 3.97
- Average teaching evaluation scores (1 = poor, 2 = fair, 3 = good, 4 = very good, 5 = superior):
 - Course rating: 4.03
 - Instructor rating: 4.03

2011 **Guest Lecturer**, AP Psychology, Parkview High School

Lecture title: *Schizophrenia*

2010 **Guest Lecturer**, Physiological Psychology, University of Georgia

Lecture title: *Neurophysiology*

2009 – 2010 **Teaching Assistant**, University of Georgia

Psychology 2102 – Psychology of Adjustment (Fall 2009 & Spring 2010)

2008 **Teaching Assistant**, University of Georgia

Psychology 1101 – Elementary Psychology (Fall 2008)

Dr. John Achee, Instructor

2007 – 2008 **Tutor**, USC Student Success Center