

CURRICULUM VITAE
AUGUST, 2021

CHRISTOPHER DRAHEIM, M. S.

Georgia Institute of Technology
School of Psychology
654 Cherry Street
Atlanta, GA 30332-0170

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EDUCATION

GEORGIA INSTITUTE OF TECHNOLOGY - ATLANTA, GA

Ph.D. Cognition and Brain Science Psychology
Minor in Quantitative Psychology
Advisor: Dr. Randall W. Engle

Expected 2021

GEORGIA INSTITUTE OF TECHNOLOGY - ATLANTA, GA

M.S. Cognition and Brain Science Psychology
Minor in Quantitative Psychology
Advisor: Dr. Randall W. Engle

August 2017

UNIVERSITY OF MICHIGAN - DEARBORN, MI

B.A. Psychology, *With High Distinction*
Minor in Philosophy
Advisor: Dr. Arlo Clark-Foos

December 2012

EMPLOYMENT

LAWRENCE UNIVERSITY – APPLETON, WI

Visiting Assistant Professor

Future Position

PROFESSIONAL EXPERIENCE

NAVAL RESEARCH LABORATORY – WASHINGTON, DC

ASEE NREIP Summer Graduate Intern
Warfighter Human Systems Integration Laboratory

Summer 2019

Description: This paid position centered around task development and design. Duties involved analyzing existing task data for the purposes of task improvement; providing input regarding ways to improve tasks in their battery; developing, modifying, and programming tasks; analyzing new task data to assess task improvement; conducting literature reviews; and providing general advice regarding task selection, individual differences, and the measurement of executive functioning.

Advisor: Dr. Noelle Browne

RESEARCH INTERESTS AND AREAS OF EXPERTISE

Research interests:

- Individual differences in executive functioning, namely working memory capacity, fluid intelligence, and attention control.
- Individual differences in the ability to monitor and adjust performance to meet task demands
- Measurement of executive functioning
- Psychological testing and adverse impact

Relevant experience and expertise:

- Experimental Human Research and Design
 - Design of research experiments with emphasis individual differences and applied test design
 - Programming Experience (E-Prime)
 - Creation of experimental design and materials that investigate attention, working memory capacity, task switching, and performance monitoring
 - Creation of computer tasks used in experiments
 - Creation of output variables for analysis
 - Set up and piloting of programs
 - Experience running participations through experiments and all other aspects of data collection
 - Creation of programs to use as proxies for real world performance and complex cognition.
 - Administrative Responsibilities
 - Laboratory Management
 - Interim and annual reports for ongoing projects
 - Management of all aspects of large-scale correlational studies including:
 - Initial planning and design
 - Submitting study protocols for IRB approval
 - Hiring and training of undergraduate research assistants
 - Purchasing supplies
 - Developing and programming experimental tasks in E-Prime
 - Participant recruitment, acquisition of informed consent, and compensation
 - Conducting data analysis in SPSS, EQS, IRTPRO, and R
 - Disseminating results in weekly lab meetings and presentations within the department
 - Disseminating results at national and international conferences
 - Writing up results in manuscripts for peer-review publication
 - Providing e-mail support for other researchers interested in using our lab's E-Prime tasks
 - Maintaining the lab website
 - Technical Skills
 - Proficient in E-Prime, SPSS, and EQS
 - Novice in IRTPRO, R, and HTML

PUBLICATIONS

Published & In Press

Martin, J. D., Tsukahara, J. S., **Draheim, C.**, Shipstead, Z. Mashburn, C. A., & Engle, R. W. (in press). The visual arrays task...visual working memory capacity or attention control? *Journal of Experimental Psychology: General*. <https://doi.org/10.31234/osf.io/u92cm>

Tsukahara, J. T., **Draheim, C.**, & Engle, R. W. (2021). Baseline pupil size is related to fluid intelligence: A reply to Unsworth et al. (2021). *Cognition*, 104826. <https://doi.org/10.1016/j.cognition.2021.104826>

Draheim, C., Tsukahara, J. S., Martin, J. D., Mashburn, C. A., & Engle, R. W. (2021). A toolbox approach to improving the measurement of attention control. *Journal of Experimental Psychology: General*, 150(2), 242-275. <https://doi.org/10.1037/xge0000783>

Tsukahara, J. S., Harrison, T. L., **Draheim, C.**, Martin, J. D., & Engle, R. W. (2020). Attention control: The missing link between sensory discrimination and intelligence. *Attention, Perception, and Psychophysics*, 82, 3445-3478. <https://doi.org/10.3758/s13414-020-02044-9>

Burgoyne, A. P., Tsukahara, J. S., **Draheim, C.**, & Engle, R. W. (2020). Differential and experimental approaches to studying intelligence in humans and non-human animals. *Learning and Motivation*, 72, Article 101689. <https://doi.org/10.1016/j.lmot.2020.101689>

Draheim, C., Mashburn, C. A., Martin, J. D., & Engle, R. W. (2019). Reaction time in differential and developmental research: A review and commentary on problems and alternatives. *Psychological Bulletin*, 145(5), 508-535. <https://doi.org/10.1037/bul0000192>

Iles, R. A., Gatumu, H., Kagundu, S., & **Draheim, C.** (2019). Information sharing and willingness-to-pay for CBPP vaccine in rural Kenya. *Vaccine*, 37(12), 1659-1666. <https://doi.org/10.1016/j.vaccine.2019.01.072>

Felez-Nobrega, M., Foster, J. L., Puig-Ribera, A., **Draheim, C.**, & Hillman, C. H. (2018). Measuring working memory in the Spanish population: Validation of a multiple shortened complex span task. *Psychological Assessment*, 30(2), 274-279. <https://doi.org/10.1037/pas0000484>

Draheim, C., Harrison, T. L., Embretson, S. E., & Engle, R. W. (2018). What item response theory can tell us about the complex span tasks. *Psychological Assessment*, 30(1), 116-129. <https://doi.org/10.1037/pas0000444>

Foster, J. L., Harrison, T. L., Hicks, K. L., **Draheim, C.**, Redick, T. S., & Engle, R. W. (2017). Do the effects of working memory training depend on baseline ability level?. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 43(11), 1677-1689. <http://dx.doi.org/10.1037/xlm0000426>

Calderón-Garcidueñas, L., Chávez, V. S. J., Vacaseydel-Aceves, N. B., Calderón-Sánchez, R., Macías-Escobedo, E., Frías, C., Giacometto, M., Velasquez, L., Félix-Villarreal, R., Martin, J. D., **Draheim, C.**, & Engle, R. W. (2016). Chocolate, Air Pollution and Children's Neuroprotection: What Cognition Tools should be at Hand to Evaluate Interventions?. *Frontiers in Pharmacology*, 7. <https://doi.org/10.3389/fphar.2016.00232>

Draheim, C., Hicks, K. L., & Engle, R. W. (2016). Combining reaction time and accuracy: The relationship between working memory capacity and task switching as a case example. *Perspectives on Psychological Science*, 11, 133-155. <https://doi.org/10.1177/1745691615596990>

Submitted, Preprint, and in Preparation

Draheim, C., Pak, R., Draheim, A. A., & Engle, R. W. (2021, August 5). The role of attention control in complex real-world tasks. *PsyArXiv*, <https://doi.org/10.31234/osf.io/9ekpu>

Burgoyne, A. P., Martin, J. D., Mashburn, C. A., Tsukahara, J. S., **Draheim, C.,** & Engle, R. W. (2021). Working memory measures for adults. In J. S. Schwieter & E. Z. S. Wen (Eds.), *The Cambridge handbook of working memory and language*.

Von Bastian, C. C., Blais, C., Brewer, G. A., Gyurkovics, M., Hedge, C., Kalamala, P., Meier, M. E., Oberauer, K., Rey-Mermet, A., Rouder, J. N., Souza, A. S., Bartsch, A. S., Conway, A. R. A., **Draheim, C.,** Engle, R. W., Fischkorn, G. T., Friedman, N. P., Gustavson, D. E., Koch, I., . . . Whitehead, P. S. (2020, July 27). Advancing the understanding of individual differences in attentional control: Theoretical, methodological, and analytical considerations. <https://doi.org/10.31234/osf.io/x3b9k>

CONFERENCE PRESENTATIONS

Draheim, C., & Engle, R. W. (November, 2021). *The visual arrays task: Lessons from four manipulations*. Poster submitted to the 62nd annual meeting of the Psychonomic Society, New Orleans, LA, United States.

Von Bastian, C. C., Blais, C., Brewer, G. A., Gyurkovics, M., Hedge, C., Kalamala, P., Meier, M. E., Oberauer, K., Rey-Mermet, A., Rouder, J. N., Souza, A. S., Bartsch, A. S., Conway, A. R. A., **Draheim, C.,** Engle, R. W., Fischkorn, G. T., Friedman, N. P., Gustavson, D. E., Koch, I., . . . Whitehead, P. S. (2020, July 27). *Advancing the understanding of individual differences in attentional control: Theoretical, methodological, and analytical considerations*. Paper presented virtually at the 61st meeting of the Psychonomic Society, Austin, TX, United States.

Draheim, C., Tsukahara, J. S., Martin, J. D., Mashburn, C. A., & Engle, R. W. (November, 2019). *Attention control is a unitary concept when measured with accuracy-based tasks*. Poster presented at the 60th annual meeting of the Psychonomic Society, Montréal, QC, Canada.

Draheim, C., Martin, J. D., Tsukahara, J. S., Mashburn, C. A., & Engle, R. W. (2018, November). *Measurement of Attention Control*. Paper presented at the 59th meeting of the Psychonomic Society, New Orleans, LA, United States.

Draheim, C., Mashburn, C. A., & Engle, R. W. (2018, November). *Reaction times do not reliably measure individual differences in cognition: The problem and solutions*. Poster presented at the 59th annual meeting of the Psychonomic Society, New Orleans, LA, United States.

Draheim C., & Engle, R. W. (2017, November). *Do individuals of differing ability level differentially adjust performance to meet task demands? Simple question, complex answer*. Poster presented at the 58th annual meeting of the Psychonomic Society, Vancouver, BC, Canada.

Tsukahara, J. S., Harrison, T. L., Hicks, K. L., **Draheim, C.,** Martin, J. D., & Engle, R. W. (2017, November). *Measuring attention control: Can we do better?* Poster presented at the 58th annual meeting of the Psychonomic Society, Vancouver, BC, Canada.

Draheim C., Harrison, T. L., & Engle, R. W. (2016, November). *The problem with the operation span: Item Response Theory and complex span tasks*. Poster presented at the 57th annual meeting of the Psychonomic Society, Boston, MA, United States.

Harrison, T. L., Hicks, K. L., **Draheim, C.**, Tsukahara, J. S., & Engle, R. W. (2016, November). *Sensory discrimination, working memory, and fluid intelligence*. Paper presented at the 57th annual meeting of the Psychonomic Society, Boston, MA, United States.

Draheim C., Harrison, T. L., & Engle, R. W. (2016, September). *What Item Response Theory can tell us about the complex span tasks*. Poster presented at the 8th biennial European Working Memory Symposium, Liege, Belgium.

Draheim, C., Hicks, K. L., & Engle, R. W. (2014, November). *Is there a relationship between task-switching and working memory capacity?* Poster presented at the 55th annual meeting of the Psychonomic Society, Long Beach, CA, United States.

Foster, J., Harrison, T. L., Hicks, K. L., **Draheim, C.**, Engle, R. W. (2014, November). *High-spans show bigger gains from working memory training than low-spans*. Poster presented at the 55th annual meeting of the Psychonomic Society, Long Beach, CA, United States.

Draheim, C., Hicks, K. L., & Engle, R. W. (2014, September). *Redefining the relationship between working memory capacity and task-switching performance*. Poster presented at the 7th biennial European Working Memory Symposium, Edinburgh, Scotland.

Draheim, C., & Clark-Foos, A. (2013, March). *Memory for emotional material under divided attention*. Paper presented at the 3rd annual CASL Undergraduate Showcase, University of Michigan-Dearborn, MI, United States.

Pfannes, K. I., Bratton, T., **Draheim, C.**, Mennie, K., & Clark-Foos, A. (2013, May). *Changing criteria to detect deception vs. imagination*. Poster presented at the 85th annual meeting of the Midwestern Psychological Association, Chicago, IL, United States.

Kiely, S., Nguyen, S., Alhashidi, J., Mennie, K., **Draheim, C.**, & Clark-Foos, A. (2013, May). *Reverse task interference in prospective memory*. Poster presented at the 85th annual meeting of the Midwestern Psychological Association, Chicago, IL, United States.

Mennie, K., **Draheim, C.**, & Clark-Foos, A. (2013, May). *You are what you play: Video games and creativity*. Poster presented at the 85th annual meeting of the Midwestern Psychological Association, Chicago, IL, United States.

Mennie, K., **Draheim, C.**, Pfannes, K., & Clark-Foos, A. (2013, May). *Interactions between valence and arousal determine enhancement of emotional memory*. Poster presented at the 85th annual meeting of the Midwestern Psychological Association, Chicago, IL, United States.

Mennie, K., **Draheim, C.**, & Clark-Foos, A. (2013, March). *Video games and creativity*. Paper presented at the 3rd annual CASL Undergraduate Showcase, University of Michigan-Dearborn, MI, United States.

Nguyen, S., Out, J., & **Draheim, C.** (2013, March). *How effective are divided attention tasks at dividing attention?* Poster presented at the 3rd annual CASL Undergraduate Showcase, University of Michigan-Dearborn, MI, United States.

Morris, R., Mikhael, Z., Khan, F., Blair, C. R., & **Draheim, C.** (2013, March). *Can completing intentions ever be done automatically?* Poster presented at the 3rd annual CASL Undergraduate Showcase, University of Michigan-Dearborn, MI, United States.

Clark-Foos, A., **Draheim, C.**, & Mennie, K. (2012, November). *Thorndike's law of belongingness in item-context binding.* Poster presented at the 53rd annual meeting of the Psychonomic Society, Minneapolis, MN, United States.

Clark-Foos, A., Schick, J., Blair, C. R., Dobbs, C. D., Hochstadt, S., & **Draheim, C.** (2012, May). *Wer sagt dass: Source monitoring is better when you understand the language.* Poster presented at the 24th annual meeting of the Association for Psychological Science, Chicago, IL, United States.

Algahmi, A. M., & **Draheim, C.** (2012, May). *Source monitoring trade-offs from prospective memory intentions.* Poster presented at the 20th annual meeting of Minds, University of Michigan-Dearborn, MI, United States.

Draheim, C., & Mennie, K. (2012, May). *Memory using Signal Detection Theory.* Poster presented at the 20th annual meeting of Minds, University of Michigan-Dearborn, MI, United States.

Draheim, C., & Abdallah, F. (2012, March). *Signal Detection Theory in recognition memory.* Poster presented at the 2nd annual CASL Undergraduate Research Showcase, University of Michigan-Dearborn, MI, United States.

Hochstadt, S., & **Draheim, C.** (2012, March). *Does memory depend on how you ask the question?* Poster presented at the 2nd annual CASL Undergraduate Research Showcase, University of Michigan-Dearborn, MI, United States.

GRADUATE COURSEWORK

General

Cognitive Psychology
Intelligence
Psychological Testing
Human Abilities
Research Methods
Biopsychology
Teaching Practicum
Transcranial Magnetic Stimulation

Quantitative

Statistical Analysis I (ANOVA)
Statistical Analysis II (regression)
Multivariate Statistics
Psychometric Theory
Structural Equation Modeling
Item Response Theory
Psychometric Scaling

Graduate GPA: 3.91

TEACHING EXPERIENCE

GEORGIA INSTITUTE OF TECHNOLOGY – ATLANTA, GA

Teaching Practicum (Prof. Dr. Dianne Leader)
Guest lecture: Neuroimaging Methods
Guest lecture: Memory
Guest lecture: Personality

Spring 2017

Teaching Assistant

Course: Intro Psychology (Prof. Tyler Harrison)
Guest lecture: Trait Theory of Human Personality

Fall 2016

Course: Cognitive Psychology (Prof. Dr. Eric Schumacher)

Spring 2014

EDITORIAL ACTIVITY

Ad hoc reviewer for the following journals:

Cognition

Memory and Cognition

Cognitive Psychology

Psychological Science

Current Directions in Psychological Science

Journal of Experimental Psychology: General (JEP:G)

Journal of Experimental Psychology: Learning, Memory, and Cognition (JEP:LMC)

Behavior Research Methods

Psychonomic Bulletin & Review

Research in Developmental Disabilities

Current Psychology

Psychological Reports

Journal of the International Neuropsychological Society (JINS)

Proceedings of the National Academy of Sciences of the United States of America (PNAS)

MENTORSHIP

Paul Duke STEM High School (Norcross, GA)

Fall 2020 – Spring 2021

- Served as external mentor for a student's AP Research course project
 - Activities included regular meetings with the student in which I provided input and advice regarding relevant literature and methodology, including participant recruitment and assignment, task selection, and analysis plan
 - Assisted with task troubleshooting and data analysis

HONORS AND AWARDS

2019 Psychonomic Society Graduate Travel Award (Psychonomic Society)

2019 Best Graduate Student Paper Award (School of Psychology, Georgia Institute of Technology)

2014 James B. Angell Scholar (University of Michigan)

2012 & 2013 Distinguished Psychology Student Award (University of Michigan-Dearborn)

2012 Richard L. Marsh Memorial Award for outstanding lab member (HuLC Lab, Dr. Arlo Clark-Foos)

2008 - 2012 Dean's Scholarship (University of Michigan-Dearborn)