

ALEXANDER P. BURGOYNE, Ph.D.

Senior Scientist, HumRRO

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EMPLOYMENT

- 2024 – Present Senior Scientist
Human Resources Research Organization (HumRRO)
Alexandria, Virginia
- 2021 – 2024 Research Scientist II
Attention & Working Memory Lab
Georgia Institute of Technology, School of Psychology
Principal Investigator: Randy Engle, Ph.D.
- 2020 – 2021 Post-Doctoral Research Fellow
Attention & Working Memory Lab
Georgia Institute of Technology, School of Psychology
Principal Investigator: Randy Engle, Ph.D.

EDUCATION

- 2019 Doctor of Philosophy
Cognition and Cognitive Neuroscience
Michigan State University, Department of Psychology
Advisor: D. Zach Hambrick, Ph.D.
- 2018 Master's Degree
Cognition and Cognitive Neuroscience
Michigan State University, Department of Psychology
Advisor: D. Zach Hambrick, Ph.D.
- 2014 Bachelor of Arts in Psychology, graduated with honor
Michigan State University, College of Social Science

SUBMITTED ARTICLES

- Frank, D., **Burgoyne, A. P.**, & Macnamara, B. N. (under review). The need for speed: Cognitive processing speed predicts performance in dynamic environments. *Journal of Applied Psychology*.
- DiCarlo, J., **Burgoyne, A. P.**, Conroy, C., Lin, D. J., & Ward, N. (under review). Self-reported and task-based measures of attention control are distinct. *Behavior Research Methods*.
- Reynolds, R., **Burgoyne, A. P.**, & Tutzkay, D. (under review). Moderators of the exemplification effect in communication research: Inferential reasoning ability and attention control.
- Bonner, C. L., **Burgoyne, A. P.**, & Barnett, C. (under review). An Examination of Mandatory Class Attendance and Academic Performance in a Doctor of Pharmacy Program. *American Journal of Pharmaceutical Education*.
- Burgoyne, A. P.**, Krieger, F., Greiff, S., & Engle, R. W. (under review). Individual differences in complex problem solving and intelligence: factor structure, nomological network, and the role of strategy use. *Journal of Experimental Psychology: General*.
- Hambrick, D. Z., Katsumata, D. S., & **Burgoyne, A. P.** (under review). Accelerating the acquisition of expertise. *Journal of Expertise*.

JOURNAL ARTICLES

- Burgoyne, A. P.**, Mashburn, C. A., Tsukahara, J. S., Pak, R., Coyne, J. T., Foroughi, C., Sibley, C., Drollinger, S. M., & Engle, R. W. (2024). Attention control measures improve the prediction of performance in Navy trainees. *International Journal of Selection and Assessment*. <https://doi.org/10.1111/ijisa.12510>
- Burgoyne, A. P.**, Frank, D., & Macnamara, B. N. (2024). Which “working memory” are we talking about? Complex span tasks versus N-back”. *Psychonomic Bulletin & Review*. <https://doi.org/10.3758/s13423-024-02622-0>

- Burgoyne, A. P.**, Seeburger, D. T., & Engle, R. W. (2024). Modality matters: Three auditory conflict tasks to measure individual differences in attention control. *Behavior Research Methods*, *56*, 5959-5985. <https://doi.org/10.3758/s13428-023-02328-6>
- Coyne, J. T., Draheim, C., Sibley, C., Armendariz, N., Melick, S., Foroughi, C., **Burgoyne, A. P.**, & Engle, R. W. (2024). Evaluation of New Measures of Spatial Ability and Attention Control for Selection of Naval Flight Students. *Human Factors in Design, Engineering, and Computing*, Vol. 159. <https://doi.org/10.54941/ahfe1005768>
- Mashburn, C. A., **Burgoyne, A. P.**, Tsukahara, J. S., Pak, R., Coyne, J. T., Sibley, C., Foroughi, C., & Engle, R. W. (2024). Knowledge, attention, and psychomotor ability: A latent variable approach to understanding individual differences in simulated work performance. *Intelligence*, *104*, 101835. <https://doi.org/10.1016/j.intell.2024.101835>
- Leung, F. Y. N., Hargitai, L. D., **Burgoyne, A. P.**, Licalalde, V. R. T., Livinston, L. A., & Shah, P. (2024). Unpacking the overlap between autism and ADHD in adults: A multi-method approach. *Cortex*, *173*, 120-137. <https://doi.org/10.1016/j.cortex.2023.12.016>
- Hambrick, D. Z., **Burgoyne, A. P.**, & Oswald, F. L. (2024). The validity of general cognitive ability predicting job-specific performance is stable across different levels of job experience. *Journal of Applied Psychology*, *109*(3), 437-455. <https://psycnet.apa.org/doi/10.1037/apl0001150>
- Hambrick, D.Z., **Burgoyne, A. P.**, Altmann, E. M., & Matteson, T. J. (2023). Explaining the Validity of the ASVAB for Job-Relevant Multitasking Performance: The Role of Placekeeping Ability. *Journal of Intelligence*, *11*, 225. <https://doi.org/10.3390/jintelligence11120225>
- Macnamara, B. N., Prather, R. W., & **Burgoyne, A. P.** (2023). What we believe about success is prone to cognitive fallacies. *Nature Reviews Psychology*, *2*(12), 716-717. <https://doi.org/10.1038/s44159-023-00255-z>
- Macnamara, B. N. & **Burgoyne, A. P.** (2023). A spotlight on bias in the growth mindset intervention literature: A reply to commentaries that contextualize the discussion (Oyserman, 2023; Yan & Schuetze, 2023) and illustrate the conclusion (Tipton et al., 2023). *Psychological Bulletin*, *149*, 242-258. <https://doi.org/10.1037/bul0000394>

- Burgoyne, A. P.**, Mashburn, C. A., Tsukahara, J. S., Pak, R., & Engle, R. W. (2023). Nature and measurement of attention control. *Journal of Experimental Psychology: General*, *152*, 2369-2402. <https://psycnet.apa.org/doi/10.1037/xge0001408>
- Campitelli, G., **Burgoyne, A. P.**, & Gobet, F. (2023). New developments in chess expertise research: An introduction to the special issue of the *Journal of Expertise*. *Journal of Expertise*, *March, 2023*.
- Burgoyne, A. P.**, Hambrick, D. Z., Stec, K., & Fenn, K. M. (2023). The ACT predicts academic performance, but why? *Journal of Intelligence*, *11*, 9. <https://doi.org/10.3390/jintelligence11010009>
- Macnamara, B. N. & **Burgoyne, A. P.** (2022). Do Growth Mindset Interventions Impact Students' Academic Achievement? A Systematic Review and Meta-Analysis With Recommendations for Best Practices. *Psychological Bulletin*. <https://doi.org/10.1037/bul0000352>
- Burgoyne, A. P.**, Mashburn, C. A., Tsukahara, J. S., & Engle, R. W. (2022). Attention control and process overlap theory: Searching for cognitive processes underpinning the positive manifold. *Intelligence*, *9*, 101629. DOI: 10.1016/j.intell.2022.101629
- Burgoyne, A. P.**, Sadiya, S., Harris, L. J., Becker, M. W., Brascamp, J. W., & Hambrick, D. Z. (2022). Revisiting the self-generation effect in proofreading. *Psychological Research*. <https://doi.org/10.1007/s00426-022-01699-3>
- Burgoyne, A. P.**, Mashburn, C. A., Tsukahara, J. S., Hambrick, D. Z., & Engle, R. W. (2021). Understanding the relationship between rationality and intelligence: A latent-variable approach. *Thinking and Reasoning*. DOI: 10.1080/13546783.2021.2008003
- Johnson, T. L., **Burgoyne, A. P.**, Mix, K. S., Young, C. J., & Levine, S. C. (2021). Spatial and mathematics skills: Similarities and differences related to age, SES, and gender. *Cognition*, *218*. DOI: 10.1016/j.cognition.2021.104918
- Burgoyne, A. P.**, Mashburn, C. A., & Engle, R. W. (2021). Reducing adverse impact in high-stakes testing. *Intelligence*, *87*, 101561. DOI: 10.1016/j.intell.2021.101561
- Burgoyne, A. P.** & Macnamara, B. N. (2021). Reconsidering the use of the mindset assessment profile in educational contexts. *Journal of Intelligence*, *9*, 39. DOI: 10.3390/jintelligence9030039

- Burgoyne, A. P.** & Engle, R. W. (2020). Attention control: A cornerstone of higher-order cognition. *Current Directions in Psychological Science*, 29, 624-630. DOI: 10.1177/0963721420969371
- Burgoyne, A. P.**, Carroll, S., Clark, D. A., Hambrick, D. Z., Plaisance K. S., Klump, K. L., & Burt, S. A. (2020). Can a brief intervention alter genetic and environmental influences on psychological traits? An experimental behavioral genetics approach. *Learning & Motivation*, 72. DOI: 10.1016/j.lmot.2020.101683
- 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 & Motivation*, 72. DOI: 10.1016/j.lmot.2020.101689
- Burgoyne, A. P.**, Hambrick, D. Z., & Altmann, E. M. (2020). Incremental validity of placekeeping as a predictor of multitasking. *Psychological Research*. DOI: 10.1007/s00426-020-01348-7
- Burgoyne, A. P.**, Hambrick, D. Z., & Macnamara, B. N. (2020). How firm are the foundations of mindset theory? The claims appear stronger than the evidence. *Psychological Science*, 31, 258-267. DOI: 10.1177/0956797619897588
- Burgoyne, A. P.**, Hambrick, D. Z., & Altmann, E. M. (2019). Placekeeping ability as a component of fluid intelligence: Not just working memory capacity. *American Journal of Psychology*, 132, 439-449. DOI: 10.5406/amerjpsyc.132.4.0439
- Burgoyne, A. P.**, Harris, L. J., & Hambrick, D. Z. (2019). Predicting skill acquisition in music: The role of general intelligence, music aptitude, and mindset. *Intelligence*, 76. DOI: 10.1016/j.intell.2019.101383
- Burgoyne, A. P.**, Hambrick, D. Z., & Altmann, E. M. (2019). Is working memory a causal factor in fluid intelligence? *Psychonomic Bulletin & Review*, 26, 1333-1339. DOI: 10.3758/s13423-019-01606-9
- Burgoyne, A. P.**, Nye, C. D., Macnamara, B. N., Charness, N., & Hambrick, D. Z. (2019). The impact of domain-specific experience on chess skill: Re-analysis of a key study. *American Journal of Psychology*, 132, 27-38. DOI: 10.5406/amerjpsyc.132.1.0027
- Burgoyne, A. P.**, Hambrick, D. Z., Moser, J. S., & Burt, S. A. (2018). Analysis of a mindset intervention. *Journal of Research in Personality*, 77, 21-30. DOI: 10.1016/j.jrp.2018.09.004

- Mix, K., Hambrick, D. Z., Satyam, V. R., **Burgoyne, A. P.**, & Levine, S. C. (2018). The latent structure of spatial skill: A test of the 2 x 2 typology. *Cognition*, *180*, 268-278. DOI: 10.1016/j.cognition.2018.07.012
- Hambrick, D. Z., Altmann, E., & **Burgoyne, A. P.** (2018). A knowledge-activation approach to testing the circumvention-of-limits hypothesis. *American Journal of Psychology*, *131*, 307-321. DOI: 10.5406/amerjpsyc.132.4.0439
- Sisk, V., **Burgoyne, A. P.**, Sun, J., Butler, J. L., & Macnamara, B. N. (2018). To what extent and under which circumstances are growth mindsets important to academic achievement? Two Meta-analyses. *Psychological Science*, *29*, 549-571. DOI: 10.1177/0956797617739704
- Hambrick, D. Z., **Burgoyne, A. P.**, Macnamara, B. N., & Ullén, F. (2018). Toward a multifactorial model of expertise: Beyond born versus made. *The New York Academy of Sciences*, *1423*, 284-295. DOI: 10.1111/nyas.13586
- Sala, G., **Burgoyne, A. P.**, Macnamara, B. N., Hambrick, D. Z., Campitelli, G., & Gobet, F. (2017). Checking the “academic selection” argument. Chess players outperform non-chess players in cognitive skills related to intelligence: A meta-analysis. *Intelligence*, *61*, 130-139. DOI: 10.1016/j.intell.2017.01.013
- Burgoyne, A. P.**, Sala, G., Gobet, F., Macnamara, B. N., Campitelli, G., & Hambrick, D. Z. (2016). The relationship between cognitive ability and chess skill: A comprehensive meta-analysis. *Intelligence*, *59*, 72-83. DOI: 10.1016/j.intell.2016.08.002

REVIEWS AND COMMENTARIES

- Burgoyne, A. P.**, Johnson, T. L., Mix, K. S., Young, C. J., & Levine, S. C. (2021). Individual differences in spatial and mathematics skills: Implications for educational and clinical psychology. *Clinical Psychiatry*, *7*, 110.
- Burgoyne, A. P.**, & Engle, R. W. (2020). Mitochondrial functioning and its relation to higher-order cognitive processes: Commentary on Geary (2018). *Journal of Intelligence*, *8*, 14. DOI: 10.3390/jintelligence8020014

Hambrick, D. Z., & **Burgoyne, A. P.** (2019). Beyond nature vs. nurture in expertise research – comment on J. Baker and N. Wattie. *Current Issues in Sport Science*, 4, 104. DOI: 10.15203/CISS_2019.104

CHAPTERS

Burgoyne, A. P., Martin, J. D., Mashburn, C. A., Tsukahara, J. S., Draheim, C., & Engle, R. W. (2023). “Measuring individual differences in working memory capacity and attention control and their contribution to language comprehension.” In J. W. Schwieter & W. Zhisheng (Eds.), *The Cambridge Handbook of Working Memory & Language*. Cambridge, UK: Cambridge University Press.

Mashburn, C. A., **Burgoyne, A. P.**, & Engle, R. W. (2023). “Working Memory, Intelligence, and Life Success: Examining Relations to Academic Achievement, Job Performance, Physical Health, Mortality, and Psychological Well-Being”. In R. H. Logie (Ed.), *Memory in Science for Society*.

Burgoyne, A. P., Harris, L. J., & Hambrick, D. Z. (2022). “The origins of musical expertise.” In G. McPherson (Ed.), *The Oxford Handbook of Music Performance*. Oxford, UK: Oxford University Press.

Hambrick, D. Z., **Burgoyne, A. P.**, & Araujo, D. (2020). “Working memory and expertise: An ecological perspective.” In R. Logie, V. Camos, & N. Cowan (Eds.), *Working Memory: State of the Science (The Oxford Handbook of Working Memory)*. Oxford, UK: Oxford University Press.

Hambrick, D. Z., **Burgoyne, A. P.**, & Altmann, E. M. (2020) "Problem solving and intelligence." In R. J. Sternberg (Ed.), *Thinking and Problem Solving (Handbook of Perception and Cognition)*, Volume 3. Academic Press.

Hambrick, D. Z., **Burgoyne, A. P.**, & Oswald, F. L. (2019) "The role of interests in the development of expertise: A multifactorial perspective." In C. D. Nye & J. Rounds (Eds.), *Vocational Interests in the Workplace: Rethinking Behavior at Work*. Routledge.

Hambrick, D. Z., **Burgoyne, A. P.**, & Oswald, F. L. (2019). “Domain-general models of expertise: The role of cognitive ability.” In P. Ward, J. M. Schraagen, J. Gore, & E. Roth (Eds.), *The Oxford Handbook of Expertise*. Oxford, UK: Oxford University Press.

Hambrick, D. Z., **Burgoyne, A. P.**, Campitelli, G., & Macnamara, B. N. (2018). "Working memory, thinking, and expertise." In L. J. Ball & V. A. Thompson (Eds.), *International Handbook of Thinking and Reasoning*. Psychology Press.

Macnamara, B. N., Hambrick, D. Z., Frank, D. J., King, M. J., **Burgoyne, A. P.**, & Meinz, E. J. (2018). "The deliberate practice view: An evaluation of definitions, claims, and empirical evidence." In D. Z. Hambrick, G. Campitelli, & B. N. Macnamara (Eds), *The Science of Expertise*. Psychology Press.

POPULAR WRITING

Burgoyne, A. P., & Hambrick, D. Z. (2021, August 31). Sometimes Mindlessness Is Better Than Mindfulness, *Scientific American*. Retrieved from <https://www.scientificamerican.com/article/pupil-size-is-a-marker-of-intelligence/>

Tsukahara, J. T., **Burgoyne, A. P.**, & Engle, R. W. (2021, June 2). Pupil Size Is a Marker of Intelligence, *Scientific American*. Retrieved from <https://www.scientificamerican.com/article/sometimes-mindlessness-is-better-than-mindfulness/>

Hambrick, D. Z. & **Burgoyne, A. P.** (2019, May 29). Looks Matter, but So Do Smarts, *Scientific American*. Retrieved from <https://www.scientificamerican.com/article/looks-matters-but-so-does-smarts/>

Burgoyne, A. P. & Hambrick, D. Z. (2017, January 12). Intelligence and the DNA Revolution, *Scientific American*. Retrieved from <https://www.scientificamerican.com/article/intelligence-and-the-dna-revolution/>

Burgoyne, A. P. & Hambrick, D. Z. (2017, August 22). Flagging Fake News or Bad Sources Won't Work, *Slate*. Retrieved from http://www.slate.com/articles/health_and_science/science/2017/01/educating_people_about_sources_won_t_stop_fake_news.html

Hambrick, D. Z. & **Burgoyne, A. P.** (2016, September 18). The Difference Between Rationality and Intelligence, *New York Times*, p. SR12.

PRESENTATIONS AND SYMPOSIA

- Burgoyne, A. P.**, Pak, R., & Engle, R. W. (2024, November). Effects of Practice on the Reliability and Validity of Three-Minute “Squared” Attention Control Tests. Poster presented at the annual conference of the Psychonomic Society, New York, NY.
- Frank, D. J., **Burgoyne, A. P.**, & Macnamara, B. N. (2024, November). The Basic Cognitive Abilities Most Beneficial for Learning and Performance in Variably-mapped Environments. Presentation at the annual conference of the Psychonomic Society, New York, NY.
- AuBuchon, A. M., **Burgoyne, A. P.**, Golden, B., Pak, R., & Engle, R. W. (2024, November). Feasibility and Reliability of measuring Children’s Attentional Control with Three-Minute Tests. Poster presented at the annual conference of the Psychonomic Society, New York, NY.
- Burgoyne, A. P.** (2024, March). *Advances in Psychological Assessments*. Invited talk given to São Francisco University (Brazil) as part of the Current Issues in Psychological Assessment lecture series.
- Burgoyne, A. P.** (2024, February). *Attention Control as a Psychometric Construct: Measurement, Modality Effects, and Predictive Validity*. Invited talk given to the Air Force Research Laboratory as part of the Human Learning & Cognition lecture series.
- Burgoyne, A. P.**, Seeburger, D. T., & Engle, R. W. (2023, October). *Is Attention Control Modality-General?* Poster presented at the annual conference of the Psychonomic Society, San Francisco, CA.
- Frank, D. J., **Burgoyne, A. P.**, Hambrick, D. Z., & Macnamara, B. N. (2023, October). *The Basic Cognitive Abilities Most Beneficial for Learning and Performance in Dynamic Environments*. Presentation at the annual conference of the Psychonomic Society, San Francisco, CA.
- Burgoyne, A. P.** (2023, August). *Measurement invariance structural equation modeling workshop*. Workshop given to the Department of Psychological Sciences at Case Western Reserve University in Cleveland, OH.
- Burgoyne, A. P.**, Tsukahara, J. S., Mashburn, C.A., & Engle, R. W. (2022, November). *Three-Minute Tests of Attention Control: Reliable and Valid Predictors of Complex Task*

Performance. Presentation at the annual conference of the Psychonomic Society, Boston, MA.

Burgoyne, A. P. & Engle, R. W. (2022, June). *Attention control measures can improve personnel selection for the U.S. Navy*. Presentation at the Naval Aerospace Medical Institute, Pensacola, FL.

Burgoyne, A. P. & Engle, R. W. (2021, June). *Cognitive Underpinnings of Individual Differences in Complex Problem Solving*. Presentation at the annual conference of the Psychonomic Society, New Orleans, LA.

Burgoyne, A. P., Hambrick, D. Z., & Macnamara, B. N. (2019, April). *How Firm Are the Foundations of Mindset Theory?* Presentation at the annual conference of the Midwestern Psychological Association, Chicago, IL.

Burgoyne, A. P., & Hambrick, D. Z. (2018, November). *Placekeeping Ability, Working Memory, and Fluid Intelligence*. Presentation at Rice University's Industrial/Organizational Psychology Department's Brown Bag Series. Houston, TX.

Burgoyne, A. P., Altmann, E. M., & Hambrick, D. Z. (2018, November). *Placekeeping Ability as a Component of Fluid Intelligence*. Poster presented at the annual Psychonomics convention, New Orleans, LA.

Macnamara, B. N. & **Burgoyne, A. P.** (2018, May). *How Important Are Growth Mindsets for Learning and Achievement?* Symposium at the annual convention of the Association for Psychological Science, San Francisco, CA.

Burgoyne, A. P., Hambrick, D. Z., & Harris, L. J. (2018, May). *The Role of Cognitive Ability, Music Aptitude, and Mindset in Acquiring Musical Skill*. Presentation at the annual convention of the Association for Psychological Science, San Francisco, CA.

Burgoyne, A. P., Burt, S. A., Moser, J., Yeager, D., Plaisance, K., & Hambrick, D. Z. (2018, April). *Altering Mindsets with a Brief Online Intervention*. Presentation at the annual conference of the Midwestern Psychological Association, Chicago, IL.

Burgoyne, A. P., Altmann, E. M., & Hambrick, D. Z. (2017, May). *Cognitive Determinants of Multitasking Ability*. Poster presented at the annual convention of the Association for Psychological Science, Boston, MA.

Burgoyne, A. P., Nye, C. D., Macnamara, B. N., Charness, N., Hambrick, D. Z. (2017, April). *The Impact of Domain-Specific Experience on Chess Skill: Re-Analysis of a Key Study*. Presentation at the annual conference of the Midwestern Psychological Association, Chicago, IL.

Burgoyne, A. P., Harris, L. J., & Hambrick, D. Z. (2016, May). *Acquiring Skill in Music*. Poster presented at the annual conference of the Midwestern Psychological Association, Chicago, IL.

Burgoyne, A. P., Sala, G., Gobet, F., Macnamara, B. N., Campitelli, G., Hambrick, D. Z. (2016, May). *The Relationship Between Intelligence and Expertise in Chess: A Meta-Analysis*. Presentation at the annual conference of the Midwestern Psychological Association, Chicago, IL.

GRANTS, HONORS, AND AWARDS

- 2024 **APS Rising Star**
The APS Rising Star designation is presented to outstanding APS members in the earliest stages of their research career post-PhD. This designation recognizes researchers whose innovative work has already advanced the field and signals great potential for their continued contributions.
- 2024 **Fellow of the Psychonomic Society**
This honor is given in recognition of outstanding independent scholarship, rigorous and interesting research, and the belief that the recipient is on track to become internationally recognized. The recipient has also proven that they are highly qualified to conduct and oversee scientific research in the field of cognitive and experimental psychology.
- 2023 **Department of Defense/Office of Naval Research
 Multidisciplinary University Research Initiative
 \$7,499,317**
Understanding and Building Overall Cognitive Capability through Attention Control.
 Grant application written by Alexander P. Burgoyne, Randall W. Engle, Earl Miller, Ed Vogel, Monica Rosenberg, Tom Reddick, & Kim Fenn.
 Co-PI: Alexander P. Burgoyne

- 2022 **Defense University Research Instrumentation Program Grant**
\$117,193
Investigating the Physiological Underpinnings of Attention Control.
Grant application written by Alexander P. Burgoyne and Randall W. Engle.
- 2022 **U.S. Army Research Institute Broad Agency Announcement**
\$1,034,940
Understanding Change in Performance: The Roles of Cognitive Abilities, "Hot Cognition", and Context
Grant application written by Brooke N. Macnamara, David Frank, and Alexander P. Burgoyne.
Co-PI: Alexander P. Burgoyne
- 2021 **American Psychological Foundation Visionary Grant**
\$18,569
Reducing Adverse Impact and Improving Personnel Selection Using Tests of Attention Control.
PI: Alexander P. Burgoyne
- 2020 **Defense University Research Instrumentation Program Grant**
\$146,400
Physiological Underpinnings of Attention Control, Working Memory Capacity, and Fluid Intelligence: The Role of the Locus Coeruleus.
Grant application written by Alexander P. Burgoyne and Randall W. Engle.
- 2018 **Research Scholars Award: \$3,500**
The Nature and Nurture of Skilled Performance: Understanding the Role of Basic Abilities and Training on Complex Task Performance.
PI: Alexander P. Burgoyne
- 2018 **Thompson Endowment Fellowship: \$1,000**
The Nature and Nurture of Skilled Performance: Understanding the Role of Basic Abilities and Training on Complex Task Performance.
PI: Alexander P. Burgoyne
- 2018 **Future Academic Scholars in Teaching Fellowship: \$2,000**
Cognitive Processes Underlying Undergraduate Writing and Proofreading.
PI: Alexander P. Burgoyne

2018 **Research Enhancement Award: \$1,000**

Circumvention of Limits in Chess.

PI: Alexander P. Burgoyne

2018 **Travel Award: \$1,100**

2017 **Summer Fellowship Award: \$600**

2015 **Rasmussen Fellowship Award: \$5,000**

MEDIA APPEARANCES

2022 “How should we measure cleverness?”
BBC World News *CrowdScience* radio broadcast
<https://www.bbc.co.uk/programmes/w3ct3j6p>

2021 “Talent or Training”
German television network 3sat/ZDF documentary
<https://www.zdf.de/dokumentation/3sat-wissenschaftdoku/210812-sendung-wido-102.html>

COGNITIVE ABILITY TESTING SOFTWARE

2022 Stroop Squared (E-Prime, E-Prime Go)
2022 Simon Squared (E-Prime, E-Prime Go)
2022 Flanker Squared (E-Prime, E-Prime Go)
2020 Auditory Flanker – Adaptive Difficulty (E-Prime, E-Prime Go)
2020 Auditory Stroop – Adaptive Difficulty (E-Prime, E-Prime Go)
2020 Auditory Simon – Adaptive Difficulty (E-Prime, E-Prime Go)
2020 Melody Memory (E-Prime, E-Prime Go)
2020 Attending to Speech in Noise (E-Prime, E-Prime Go)
2020 Multiple Object Tracking (Open Sesame)
2017 Visual Arrays Task (E-Prime)
2017 Choose-A-Move Chess Test (E-Prime)
2017 Chess Knowledge Test (E-Prime)
2017 Typing Speed Test (E-Prime)
2016 Reading Comprehension Test (E-Prime)

2016 Pattern Comparison Test (E-Prime)

All programs are free to download at www.scienceofexpertise.com/alex or by contacting burgoyne4@gmail.com

WEB DESIGN AND MANAGEMENT

www.journalofexpertise.org – Official website for the Journal of Expertise

ACADEMIC POSITIONS

- 2021 – 2024 Research Scientist II
 Attention & Working Memory Lab
 Georgia Institute of Technology, School of Psychology
 Principal Investigator: Randy Engle, Ph.D.
- Fall 2022 Lecturer/Instructor of Record
 Psychology 6011 (A): Graduate-level Cognitive Psychology
 Georgia Institute of Technology
- Summer 2022 Lecturer/Instructor of Record
 Psychology 1101 (SF): General Psychology
 Georgia Institute of Technology
Student evaluations
Overall instructor effectiveness: 5/5, 100th percentile at GT
Inclusivity: 5/5, 100th percentile at GT
Enthusiasm: 5/5, 100th percentile at GT
- Spring 2022 Lecturer/Instructor of Record
 Psychology 1101 (G): General Psychology
 Georgia Institute of Technology
Student evaluations
Overall instructor effectiveness: 4.9/5, 99th percentile at GT
Inclusivity: 4.9/5, 99th percentile at GT
Enthusiasm: 4.9/5, 99th percentile at GT

- 2020 – 2021 Post-Doctoral Research Fellow
Attention & Working Memory Lab
Georgia Institute of Technology, School of Psychology
Principal Investigator: Randy Engle, Ph.D.
- 2015 – 2019 Graduate Research Assistant/Laboratory Manager
Expertise Laboratory
Michigan State University, Department of Psychology
Supervisor: D. Zach Hambrick, Ph.D.
- 2016 Teaching Assistant
Psychology 402(W): Sensation and Perception
Michigan State University, Department of Psychology
Professor: Mark Becker, Ph.D.
- 2015 Teaching Assistant
Psychology 244: Developmental Psychology: Infancy through
Childhood
Michigan State University, Department of Psychology
Professor: Lauren J. Harris, Ph.D.
- 2014 – 2015 Professional Aide
Michigan Twins Project, Michigan State University
Principal Investigators: Kelly Klump, Ph.D., Alex Burt, Ph.D.
- 2013 Teaching Assistant
Psychology 200: Introduction to Cognitive Psychology
Michigan State University, Department of Psychology
Professor: Mark Becker, Ph.D.
- 2012 – 2013 Research Assistant
Michigan Twins Project, Michigan State University
Principal Investigators: Kelly Klump, Ph.D., Alex Burt, Ph.D.

PROFESSIONAL SERVICE

- 2023 Led the College of Sciences Research Faculty Awards Committee for
FY23 at Georgia Tech

2023 – Present	Selected as the Research Faculty Liaison for the School of Psychology
2022 – Present	School of Psychology representative for the Research Faculty Advisory Council at Georgia Tech.
2022 – Present	Associate Editor for the <i>Journal of Expertise</i>
2022 – Present	Guest Editor for the <i>Journal of Expertise</i> special issue: The Science of Chess Expertise.
2022	Guest Editor for the <i>Journal of Intelligence</i> special issue: Skill Acquisition, Expertise, and Achievement
2017 – Present	Reviewer for the following journals: <i>Journal of Experimental Psychology: General</i> , <i>Journal of Experimental Psychology: Learning, Memory, and Cognition</i> , <i>Journal of Behavioral Decision Making</i> , <i>Clinical Psychological Science</i> , <i>Intelligence</i> , <i>Military Psychology</i> , <i>Music Perception</i> , <i>Journal of Expertise</i> , <i>Advances in Cognitive Psychology</i> , <i>Organizational Behavior and Human Decision Processes</i> , <i>Learning and Individual Differences</i> , <i>Frontiers in Psychology</i> .
2016	Reviewer for the Association for Psychological Science Student Grant Competition
2016	Student Representative, <i>Quantitative Genetics Faculty Search Committee</i> , Psychology Department, Michigan State University East Lansing, MI

TECHNICAL SKILLS

Structural equation modeling (*R*, *Amos*, *MPlus*, *JASP*)
 Meta-analysis (*R*, *Comprehensive Meta-Analysis*, *JASP*)
 Drift diffusion modeling (*R*)
 Multi-level modeling (*R*, *SPSS*, *JASP*)
 Latent growth curve modeling (*R*, *JASP*)
 Power analysis (*G*Power*)
 Experiment program development (*E-Basic*, *Open Sesame*, *PsyToolkit*)
 Web design (*HTML*, *CSS*)

Website management and graphic design (*Adobe Dreamweaver, Photoshop, Illustrator*)

PROFESSIONAL DEVELOPMENT

Fall	2018	Future Academic Scholars in Teaching Fellow
Spring	2017	Leadership Academy at Michigan State University
Summer	2016	Certification in College Teaching Institute
Summer	2016	Introductory & Intermediate Structural Equation Modeling Workshop
Summer	2015	Teaching Assistant Institute at Michigan State University