# Matthew W. Miller, Ph.D.

Associate Professor, Auburn University

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## Education

2009 – 2012 Ph.D., University of Maryland: Neuroscience and Cognitive Science (advisor: Bradley D. Hatfield)

2007 – 2008 M.S., George Mason University: Exercise, Fitness, and Health Promotion

2001 – 2005 B.A., Elizabethtown College: Political Science

## Employment

2020 – Graduate Program Officer, School of Kinesiology, Auburn University

2018 – Center for Neuroscience Initiative, Auburn University

2017 – Associate Professor, School of Kinesiology, Auburn University

Courtesy Joint Appointment, Department of Psychological Sciences, Auburn University

2012 – 2017 Assistant Professor, Auburn University

Courtesy Joint Appointment, Department of Psychological Sciences, Auburn University

## Research

My general objective is to determine means to enhance people’s motor performance and health. To these ends, I aim to reveal the basis of motor learning and performance, as well as how to leverage this knowledge to enhance learning and performance. Additionally, I strive to understand why people do (not) engage in physical activity. I often use electroencephalography (EEG) to address my research aims.

### Publications

56. Bacelar, M. F. B. **┼**, Parma, J. O., Murrah, W. M., & **Miller, M. W.** (in press). Meta-analyzing enhanced expectancies on motor learning: positive effects but methodological concerns. *International Review of Sport and Exercise Psychology*. <https://doi.org/10.1080/1750984X.2022.2042839>

55. Bacelar, M. F. B., Parma, J. O., Cabral, D. A., Daou, M., Lohse, K. R., & **Miller, M. W.** (2022). Dissociating the contributions of motivational and information processing factors to the self-controlled feedback learning benefit. *Psychology of Sport and Exercise*, *59*, 102119.

[https://doi.org/10.1016/j.psychsport.2021.102119](https://www.sciencedirect.com/science/article/abs/pii/S1469029221002375?via%3Dihub).

54. Cabral, D. A. R., Wilson, A. E., & **Miller, M. W.** (in press). The effect of implicit learning on motor performance under psychological pressure: A systematic review and meta-analysis. *Sport, Exercise, and Performance Psychology*. https://doi.org/10.1037/spy0000286.

53. Keesling, R., Kavazis, A. N., Wax, B., **Miller, M. W.**, & Vickers, B. (in press). A comparison of three different warm-ups on 800-meter running performance in elite Division I track athletes—A pilot study. *International Journal of Exercise Science*.

52. Thomas, J. L., Fawver, B., Taylor, S., **Miller, M. W.**, Williams, A. M., & Lohse, K. R. (2021). Using error-estimation to probe the psychological processes underlying intra-task interference effects. *Human Movement Science*, *79*, <https://doi.org/10.1016/j.humov.2021.102854>.

51. **Miller, M. W.┼**, Cheval, B.**┼**, Bacelar, M. F. B., Cabral, D. A. R., Feiss, R. S., Parma, J. O., Renaud, O., Sander, D., Krigolson, O. E., & Boisgontier, M. P. (in principle acceptance). Relationship between reward-related brain activity and opportunities to sit. *Cortex*. <https://osf.io/tcr7f>

50. Cheval, B., Cabral, D. A. R., Daou, M., Bacelar, M. F. B., Parma, J. O., Forestier, C., Orsholits, D., Maltagliati, S., Sander, D., Boisgontier, M. P., & **Miller, M. W.** (2021). Inhibitory control elicited by physical activity and inactivity stimuli: an EEG study. *Motivation Science*, *7*, 386 – 399. [https://doi.org/10.1037/mot0000236](https://psycnet.apa.org/doi/10.1037/mot0000236)

49. Pathania, A., Schreiber, M., **Miller, M. W.**, Euler, M. J., & Lohse, K. R. (2021). Exploring the reliability and sensitivity of the EEG power spectrum as a biomarker. *International Journal of Psychophysiology*, *160*, 18 – 27. <https://doi.org/10.1016/j.ijpsycho.2020.12.002>

48. **Miller, M. W.**, Bacelar, M. F. B., Feiss, R. S., Daou, M., Alderman, B. L., & Ekkekakis, P. (2020). P3b as an electroencephalographic index of automatic associations of exercise-related images. *International Journal of Psychophysiology*, *158*, 114 – 122. <https://doi.org/10.1016/j.ijpsycho.2020.10.004>

47. Cabral, D. A. R.┼, Daou, M.┼, Bacelar, M. F. B., Parma, J. O., & **Miller, M. W.** (in principle acceptance). Does learning a skill with the expectation of teaching it impair the skill’s execution under psychological pressure if the skill is learned with analogy instructions? *Psychology of Sport and Exercise*. <https://doi.org/10.1016/j.psychsport.2020.101757>

46. Cheval, B., Daou, M., Cabral, D. A. R., Bacelar, M. F. B., Parma, J. O., Forestier, C., Orsholits, D., Sander, D., Boisgontier, M. P., & **Miller, M. W.** (2020). Higher inhibitory control is required to escape the innate attraction to effort minimization. *Psychology of Sport and Exercise*, *51*, 101781. <https://doi.org/10.1016/j.psychsport.2020.101781>

45. Brush, C. J., Foti, D., Bocchine, A. J., Muniz, K. M., Gooden, M. J., Spaeth, A. M., **Miller, M. W.**, & Alderman, B. L. (2020). Aerobic exercise enhances positive emotional reactivity in individuals with depressive symptoms: Evidence from neural responses to reward and emotional content. *Mental Health and Physical Activity*, *19*. <https://doi.org/10.1016/j.mhpa.2020.100339>

44. Boisgontier, M. P., Orsholits, D., von Arx, M., Sieber, S., **Miller, M. W.**, Courvoisier, D., Iversen, M., Cullati, S., & Cheval, B. (2020). Adverse childhood experiences, depressive symptoms, functional dependence, and physical activity: A moderated mediation model. *Journal of Physical Activity and Health*, *17*, 790 – 799. <https://doi.org/10.1123/jpah.2019-0133>

43. Bacelar, M. F. B., Lohse, K. R., & **Miller, M. W.** (2020). The effect of rewards and punishments on learning action selection and execution components of a motor skill. *Journal of Motor Learning and Development*, *8*, 475 – 496. <https://doi.org/10.1123/jmld.2019-0039>

* **Outstanding Paper of the Year in *Journal of Motor Learning and Development***

42. Cheval, B., **Miller, M. W.**, Orsholits, D., Berry, T., Sander, D., & Boisgontier, M. P. (2020). Physically active individuals look for more: an eye tracking study of attentional bias. *Psychophysiology*, *57*, e13582. <https://doi.org/10.1111/psyp.13582>

41. Brinkerhoff, S. A., Murrah, W. M., Hutchison, Z., **Miller, M.**, & Roper, J. A. (in press). Words matter: Instructions dictate “self-selected” walking speed in young adults. *Gait and Posture*. <https://doi.org/10.1016/j.gaitpost.2019.07.379>

40. Lohse, K. R., **Miller, M. W.**, Daou, M., Valerius, W., & Jones, M. (2020). Dissociating the contributions of reward-prediction errors to trial-level adaptation and long-term learning. *Biological Psychology*, *149*. <https://doi.org/10.1016/j.biopsycho.2019.107775>

39. Shaw, E. P., Rietschel, J. C., Hendershot, B. D., Pruziner, A. L., Wolf, E. J., Dearth, C. L., **Miller, M. W.**, Hatfield, B. D., & Gentili, R. J. (2019). A comparison of cognitive workload in individuals with transtibial and transfemoral lower limb loss during dual-task walking under varying demand. *Journal of the International Neuropsychological Society*, *25*, 985 – 997. <https://doi.org/10.1017/S1355617719000602>

38. Cheval, B., Rebar, A. L., **Miller, M. W.**, Sieber, S., Orsholits, D., Baranyi, G., Courvoisier, D., Cullati, S., Sander, D., Chalabaev, A., Boisgontier, M. P. (2019). Cognitive resources moderate the adverse impact of poor perceived neighborhood conditions on self-reported physical activity in older age. *Preventive Medicine*, *126*, 105741. <https://doi.org/10.1016/j.ypmed.2019.05.029>

37. Wilhelm, R. A., **Miller, M. W.**, Gable, P. A. (2019). Neural and attentional correlates of intrinsic motivation resulting from social performance expectancy. *Neuroscience*, *416*, 137 – 146. <https://doi.org/10.1016/j.neuroscience.2019.07.039>

36. Shaw, E. P., Rietschel, J. C., Shuggi, I. M., Xu, Y., Chen, S., **Miller, M. W.**, Hatfield, B. D., & Gentili, R. J. (2019). Cerebral cortical networking for mental workload assessment under various demands during dual-task walking. *Experimental Brain Research*, *237*, 2279 – 2295. <https://doi.org/10.1007/s00221-019-05550-x>

35. Cheval, B.┼, Boisgontier, M. P.┼, Bacelar, M. F. B., Feiss, R., & **Miller, M. W.** (2019). Opportunities to sit and stand trigger equivalent reward-related brain activity. *International Journal of Psychophysiology*, *141*, 9 – 17. <https://doi.org/10.1016/j.ijpsycho.2019.04.009>

34. Daou, M., Rhoads, J. A., Jacobs, T., Lohse, K. R., & **Miller, M. W.** (2019). Does limiting pre-movement time during practice eliminate the benefit of practicing while expecting to teach? *Human Movement Science*, *64*, 153 – 163. <https://doi.org/10.1016/j.humov.2018.11.017>

33. Pruziner, A. L., Shaw, E. P., Rietschel, J. C., Hendershot, B. D., **Miller, M. W.**, Wolf, E. J., Hatfield, B. D., Dearth, C. L., & Gentili, R. J.(2019). Biomechanical and neurocognitive performance outcomes of walking with transtibial limb loss while challenged by a concurrent task. *Experimental Brain Research*, *237*, 477 – 491. <https://doi.org/10.1007/s00221-018-5419-8>

32. Rhoads, J. A., Daou, M., Lohse, K. R., & **Miller, M. W.** (2019). The effects of expecting to teach and actually teaching on motor learning. *Journal of Motor Learning and Development*, *7*, 84 – 105. <https://doi.org/10.1123/jmld.2017-0052>

31. Daou, M., Hutchison, Z., Bacelar, M., Rhoads, J. A., Lohse, K. R., & **Miller, M. W.** (2019). Learning a skill with the expectation of teaching it impairs the skill’s execution under psychological pressure. *Journal of Experimental Psychology: Applied*, *25*, 219 – 229. <https://psycnet.apa.org/doi/10.1037/xap0000191>

30. Leiker, A. M.┼, Pathania, A.┼, **Miller, M. W.**, & Lohse, K. R. (2019). Exploring the neurophysiological effects of self-controlled practice in motor skill learning. *Journal of Motor Learning and Development*, *7*, 13 – 34. <https://doi.org/10.1123/jmld.2017-0051>

29. Pathania, A., Leiker, A. M., Euler, M., **Miller, M. W.**, & Lohse, K. R. (2019). Challenge, motivation, and effort: Neural and behavioral correlates of self-control of difficulty during practice. *Biological Psychology*, *141*, 52 – 63. <https://doi.org/10.1016/j.biopsycho.2019.01.001>

28. Jaquess, K. J., Lo, L., Oh, H., Lu, C., Ginsberg, A., Tan, Y. Y., Lohse, K. R., **Miller, M. W.**, Hatfield, B. D., & Gentili, R. J.(2018). Changes in mental workload and motor performance throughout multiple practice sessions under various levels of task difficulty. *Neuroscience*, *393*, 305 – 318. <https://doi.org/10.1016/j.neuroscience.2018.09.019>

27. Daou, M., Lohse, K. R., & **Miller, M. W.** (2018). Does practicing a skill with the expectation of teaching alter motor preparatory cortical dynamics? *International Journal of Psychophysiology*, *127*, 1 – 10. <https://doi.org/10.1016/j.ijpsycho.2018.02.013>

26. Daou, M., Sassi, J. M., **Miller, M. W.**, & Gonzalez, A. M. (2018). Effects of a multi-ingredient energy supplement on cognitive performance and cerebral-cortical activation. *Journal of Dietary Supplements*, *13*, 1 – 12. <https://doi.org/10.1080/19390211.2018.1440686>

25. Gentili, R. J., Jaquess, K. J., Shuggi, I. M., Oh, H., Lo, L., Tan, Y. Y., Domingues, C. A., Blanco, J. A., Rietschel, J. C., **Miller, M. W.**, & Hatfield, B. D. (2018). Combined assessment of attentional reserve and cognitive effort under various levels of challenge with a dry EEG system. *Psychophysiology*, *55*, e13059. <https://doi.org/10.1111/psyp.13059>

24. Shaw, E. P., Rietschel, J. C., Hendershot, B. D., Pruziner, A. L., **Miller, M. W.**, Hatfield, B. D., & Gentili, R. J. (2018). Measurement of attentional reserve and mental effort for cognitive workload assessment under various task demands during dual-task walking. *Biological Psychology*, *134*, 39 – 51. <https://doi.org/10.1016/j.biopsycho.2018.01.009>

23. Grand, K. F., Daou, M., Lohse, K. R., & **Miller, M. W.** (2017). Investigating the mechanisms of an incidental choice on motor learning. *Journal of Motor Learning and Development*, *5*, 207 – 226. <https://doi.org/10.1123/jmld.2016-0041>

22. Daou, M.,Lohse, K. L., & **Miller, M. W.** (2017). To take the stairs or not to take the stairs? Employing the Reflective-Impulsive Model to predict spontaneous physical activity. *Sports*, *5*, e1 – 9. <https://dx.doi.org/10.3390%2Fsports5040075>

21. Jaquess, K. J., Gentili, R. J., Lo, L., Oh, H., Zhang, J., Rietschel, J. C., **Miller, M. W.**, Tan, Y. Y., & Hatfield, B. D.(2017). Empirical evidence for the relationship between cognitive workload and attentional reserve. *International Journal of Psychophysiology*, *121*, 46 – 55. <https://doi.org/10.1016/j.ijpsycho.2017.09.007>

20. Daou, M., Buchanan, T. L., Lindsey, K. R., Lohse, K. R., & **Miller, M. W.** (2016). Expecting to teach enhances learning: Evidence from a motor learning paradigm. *Journal of Motor Learning and Development*, *4*, 197 – 207. <https://doi.org/10.1123/jmld.2015-0036>

19. Costanzo, M. E., VanMeter, J., Janelle, C. M., Braun, A., **Miller, M. W.**, Oldham, J., Russell, B. A. H., & Hatfield, B. D. (2016). Neural efficiency in expert cognitive-motor performers during affective challenge. *Journal of Motor Behavior*, *48*, 573 – 588. <https://doi.org/10.1080/00222895.2016.1161591>

18. Meadows, C. C., Gable, P. A**.**, Lohse, K. R., & **Miller, M. W.** (2016). Motivation and motor cortical activity can independently affect motor performance. *Neuroscience*, *339*, 174 – 179. <https://doi.org/10.1016/j.neuroscience.2016.09.049>

17. Daou, M., Lohse, K. R., & **Miller, M. W.** (2016). Expecting to teach enhances motor learning and information processing during practice. *Human Movement Science*, *49*, 336 – 345. <https://doi.org/10.1016/j.humov.2016.08.009>

16. Lohse, K. R., Buchanan, T. L., & **Miller, M. W.** (2016). Under-powered and over-worked: Problems with data analysis in motor learning studies. *Journal of Motor Learning and Development*, *4*, 37 – 58. <https://doi.org/10.1123/jmld.2015-0010>

15. Leiker, A. M., Bruzi, A. T., **Miller, M. W.**, Nelson, M., Wegman, R., & Lohse, K. R. (2016). The effects of autonomous difficulty selection on engagement, motivation, and learning in a motion-controlled video game task. *Human Movement Science*, *49*, 326 – 335. <https://doi.org/10.1016/j.humov.2016.08.005>

14. Iso-Ahola, S. E., & **Miller, M. W.** (2016). Contextual priming of a complex behavior: Exercise. *Psychology of Consciousness: Theory, Research, and Practice*, *3*, 258 – 269. [https://doi.org/10.1037/cns0000078](https://psycnet.apa.org/doi/10.1037/cns0000078)

13. Iso-Ahola, S. E., Dotson, C. O., Jagodinsky, A. E., Clark, L. C., Smallwood, L. L., Wilburn, C., Weimar, W. H., & **Miller, M. W.** (2016). Improving performance by anchoring movement and “nerves”. *Human Movement Science*, *49*, 239 – 247. <https://doi.org/10.1016/j.humov.2016.07.008>

12. Meadows, C. C.┼, Gable, P. A. **┼**, Lohse, K. R., & **Miller, M. W.** (2016). The effects of reward magnitude on reward processing: An averaged and single trial event-related potential study. *Biological Psychology*, *118*, 154 – 160. <https://doi.org/10.1016/j.biopsycho.2016.06.002>

11. Leiker, A. M. **┼**, **Miller, M. W. ┼**, Brewer, L. E., Nelson, M., Siow, M., & Lohse, K. R. (2016). The relationship between engagement and neurophysiological measures of attention in motion-controlled video games: A randomized controlled trial. *Journal of Medical Internet Research: Serious Games*, *4*, e4*.* <https://doi.org/10.2196/games.5460>

10. Grand, K. F., Bruzi, A. T., Dyke, F. B., Godwin, M. M., Leiker, A. M., Thompson, A. G., Buchanan, T. L., & **Miller, M. W.** (2015). Why self-controlled feedback enhances motor learning: Answers from electroencephalography and indices of motivation. *Human Movement Science*, *43*, 23 – 32. <https://doi.org/10.1016/j.humov.2015.06.013>

9. Dyke, F., Leiker, A., Grand, K., Godwin, M. M., Thompson, A. G., Rietschel, J. C., McDonald, C. G., & **Miller, M. W.** (2015). The efficacy of auditory probes in indexing cognitive workload is dependent on stimulus complexity. *International Journal of Psychophysiology*, *95*, 56 – 62. <https://doi.org/10.1016/j.ijpsycho.2014.12.008>

8. Rietschel, J. C., McDonald, C. G., Goodman, R. N., **Miller, M. W.**, Jones-Lush, L. M., Wittenberg, G. F., & Hatfield, B. D. (2014). Psychophysiological support of increasing attentional reserve during the development of a motor skill. *Biological Psychology*, *103*, 349 – 356. <https://doi.org/10.1016/j.biopsycho.2014.10.008>

7. Dyke, F. **┼**, Godwin, M. M. **┼**, Goel, P., Rehm, J., Rietschel, J. C., Hunt, C. A., & **Miller, M. W.** (2014). Cerebral cortical activity associated with nonexperts’ most accurate motor performance. *Human Movement Science*, *37*, 21 – 31. <https://doi.org/10.1016/j.humov.2014.06.008>

6. **Miller, M. W.,** Pressaco, A., Groman, L. J., Bur, S., Rietschel, J. C., Gentili, R. J., McDonald, C. G., Iso-Ahola, S. E., & Hatfield, B. D. (2014). The effects of team environment on cerebral cortical processes and attentional reserve. *Sport, Exercise, and Performance Psychology*, *3*, 61 – 74. [https://doi.org/10.1037/spy0000001](https://psycnet.apa.org/doi/10.1037/spy0000001)

* **Outstanding Paper of the Year in *Sport, Exercise, and Performance Psychology***

5. Schmitt, K. R. B. **┼**, Larsen, E. **┼**, **Miller, M. W.**, Andrews, A., Badawy, A. A., Dougherty, M., Hrapczynski, K., Robertson, B., Taylor, A., Williams, A., Kramer, S., & Benson, S. (2013). A survey tool for assessing student expectations early in a semester. *Journal of Microbiology and Biology Education*, *14*, 255 – 257. <http://dx.doi.org/10.1128/jmbe.v14i2.581>

4. Palmer, K. K.**┼**, **Miller, M. W.┼**, & Robinson, L. E. (2013). Acute exercise enhances preschoolers’ ability to sustain attention. *Journal of Sport and Exercise Psychology*, *35*, 433 - 437. <https://doi.org/10.1123/jsep.35.4.433>

3. **Miller, M. W.**, Groman, L. J., Rietschel, J. C., McDonald, C. G., Iso-Ahola, S. E., & Hatfield, B. D. (2013). The effects of team environment on attentional resource allocation and cognitive workload. *Sport, Exercise, and Performance Psychology, 2*, 77 – 89. [https://doi.org/10.1037/a0030586](https://psycnet.apa.org/doi/10.1037/a0030586)

2. Rietschel, J. C. ┼, **Miller, M. W┼.**, Gentili, R. J., Goodman, R. N., McDonald, C. G., & Hatfield, B. D. (2012). Cerebral-cortical networking and activation increase as a function of cognitive-motor task difficulty. *Biological Psychology, 90*, 127 – 133. <https://doi.org/10.1016/j.biopsycho.2012.02.022>

1. **Miller, M. W┼.**,Rietschel, J. C. ┼, McDonald, C. G., & Hatfield, B. D. (2011). A novel approach to the physiological measurement of mental workload. *International Journal of Psychophysiology, 80*, 75 – 78. <https://doi.org/10.1016/j.ijpsycho.2011.02.003>

### Books

1. Gable, P. A., **Miller, M. W.**, & Bernat, E. M., Eds. (in press). *The Oxford Handbook of EEG Frequency Analysis*. New York, NY: Oxford University Press.

### Book Chapters

3. Gable, P. A., & **Miller, M. W.** (in press). Introduction: methods for collecting EEG data for frequency analyses in humans. In P. A. Gable, M. W. Miller, & E. M. Bernat (Eds.). *The Oxford Handbook of EEG Frequency Analyses*. New York, NY: Oxford University Press.

2. Lohse, K. R., **Miller, M. W**, Bacelar, M., & Krigolson, O. E. (2019). Errors, rewards, and reinforcement in motor skill learning. In N. J. Hodges & A. M. Williams (Eds.). *Skill Acquisition in Sport: Research, Theory and Practice* (3rd ed.). New York, NY: Routledge.

1. Hastie, P. A., **Miller, M. W.**, Oliver, G. D., & Weimer, W. H. (2014). Curves are in. In K. Armour (Ed.). *Pedagogical Cases in Sport, Exercise, and Movement. Volume 1: Physical Education and Youth Sport.* New York, NY: Routledge.

### Technical Reports

1. Hatfield, B. D., Gentili, R. J., Rietschel, J. C., Lo, L., Oh, H., Jaquess, K. J., **Miller, M.**, & Tan, Y. Y. (2013). Objective assessment of cognitive workload and attentional reserve in pilots during varying degrees of task difficulty. Final Report for Lockheed Martin Corporation.

### Conference Symposia

5. **Miller, M. W.** (2019). Using electroencephalography to investigate attitudes toward exercise. Conceptual, theoretical and methodological advances in exercise motivation research: affect and automaticity. Brand, R., & Ekkekakis, P. (Co-Chairs). *15th European Congress of Sport & Exercise Psychology*. Münster, Germany.

* **Featured symposium**

4. **Miller, M. W.** (2018). The effects of team environment on cognitive resource allocation. Cognitive-motor and psychophysiological mechanisms underlying motor control and learning in a social context: From human-human to human-robot dynamics. Gentili, R. J. & **Miller, M. W.** (Co-Chairs.) *North American Society for the Psychology of Sport and Physical Activity.* Denver, CO.

3. **Miller, M. W.** & Grand, K. F. (2016). The effects of autonomy during practiced on feedback processing and motor learning. Doing it right: Neural correlates of action preparation, performance monitoring, and learning. Gable, P. A., & **Miller, M. W.** (Co-Chairs.) *Society for Psychophysiological Research’s Annual Meeting*, Minneapolis, MN.

2. Discussant: **Miller, M. W.** (2016). Psychophysiological evidence on the significant and interdependent relationship between health behaviors and cognitive functioning. Carbine, K. (Chair.) *Society for Psychophysiological Research’s Annual Meeting*, Minneapolis, MN.

1. Rietschel, J. C., Godwin, M. M., Dyke, F. B., Lindsey, K. R., Meadows, C. C., Sullivan, Z. V., Rietschel, C. H., & **Miller, M. W.** (2015). The effects of mindfulness on endurance: How trait mindfulness and brief mindfulness induction interact to affect muscular endurance. Attentional focus in endurance performance. Schücker, L. (Chair.) *North American Society for the Psychology of Sport and Physical Activity Annual Meeting,* Portland, OR.

### Invited Presentations

7. Ste-Marie, D., Lohse, K. Carter, M., & **Miller, M.** (2020).How do we navigate the demands for open, transparent, and rigorous research in an academic world that demands productivity? *North American Society for the Psychology of Sport and Physical Activity Motor Learning and Control Seminar Series*.

6. **Miller, M. W.** (2020). The effects of practicing a motor skill with the expectation of teaching it: Findings from basic and applied cognitive neuroscience and social psychology research. *University of Ottawa School of Human Kinetics Distinguished Speaker Series*.

5. **Miller, M. W.** (2019). Using EEG reinforcement learning brain signals to understand learning and physical activity behavior. *Brigham Young University*.

4. **Miller, M. W.** (2019). The effects of practicing a motor skill with the expectation of teaching it: Findings from basic and applied cognitive neuroscience and social psychology research. *University of British Columbia School of Kinesiology Distinguished Speaker Series*.

3. **Miller, M. W.**, & Daou, M. (2017). Enhancing motor skill acquisition by preparing to teach. *The 2017 Sports Science Summit*. Streamed Live on Internet.

2. **Miller, M. W.** (2016). Basic and applied motor learning and performance research. *Department of Psychology, University of Alabama Seminar Series*.

* Funded by Southeastern Conference Faculty Travel Grant Award

1. **Miller, M. W.** (2013). The effects of team environment on the brain and psychomotor performance. *Oral presentation invited for the 2013 Mid-Atlantic Regional Chapter of the American College of Sports Medicine Conference*, Harrisburg, PA.

### Conference Presentations

91. Ude, A., Purdue, H., Carpenter, S., **Miller, M.**, & Alderman, B. (2021). Using the LPP and P3b to capture automatic associations of exercise-related images. *Virtual presentation to be delivered at the Annual Meeting of the Society for Psychophysiological Research*.

90. Bacelar, M., Parma, J., Cabral, D., Lohse, K., & **Miller, M.** (2021). Beyond correct vs. incorrect: investigating graded feedback processing in a more naturalistic skill learning paradigm. *Virtual presentation to be delivered at the Annual Meeting of the Society for Psychophysiological Research*.

89. Cabral, D., Wilson, A., & **Miller, M.** (2021). The effect of implicit learning on motor performance under psychological pressure: a meta-analysis. *Virtual presentation delivered at the Annual Meeting of the North American Society for the Psychology of Sport and Physical Activity*.

88. Cheval, B., Cabral, D., Daou, M., Bacelar, M., Parma, J., Forestier, C., Orsholits, D., Maltagliati, S., Sander, D., Boisgontier, M., & **Miller, M.** (2021). Sedentary behaviors and cognitive control: an EEG study. *Virtual presentation delivered at the Annual Meeting of the North American Society for the Psychology of Sport and Physical Activity*.

87. Bacelar, M. F. B., Parma, J. O, Murrah, W., & **Miller, M.** (2021). Meta-analysis of enhanced expectancies in motor learning. *Virtual presentation delivered at the Annual Meeting of the North American Society for the Psychology of Sport and Physical Activity*.

86. **Miller, M. W.**, Bacelar, M. F. B., Feiss, R. S., Daou, M., Alderman, B. L., & Ekkekakis, P. (2020). P3b as an electroencephalographic index of automatic associations of exercise-related images. *Virtual presentation delivered at the Annual Meeting of the Society for Psychophysiological Research*.

85. Bacelar, M., Parma, J., McClure, M., Barnes, B., Holley, J., Cabral, D., Daou, M., Lohse, K., & **Miller, M.** (2020). Error estimation during practice may hinder motor learning: evidence from a self-controlled feedback paradigm. *Virtual presentation delivered at the Annual Meeting of the North American Society for the Psychology of Sport and Physical Activity*.

84. Cheval, B., Daou, M., Cabral, D., Bacelar, M., Parma, J., Forestier, C., Orsholits, D., Sander, D., Boisgontier, M., & **Miller, M.** (2020). Response inhibition to physical inactivity stimuli in an affective go/no-go task. *Virtual presentation delivered at the Annual Meeting of the North American Society for the Psychology of Sport and Physical Activity*.

83. **Miller, M.**, Bacelar, M., Feiss, R., Daou, M., Alderman, B., & Ekkekakis, P. (2020). P3b as an electroencephalographic index of automatic associations of exercise-related images. *Virtual presentation delivered at the Annual Meeting of the North American Society for the Psychology of Sport and Physical Activity*.

82. Parma, J., Zona, V., Bacelar, M., Cabral, D., & **Miller, M. W.** (2020). The effect of distinct settings and types of exercise images on the automatic processing of non-exercisers. *Virtual presentation delivered at the Annual Meeting of the North American Society for the Psychology of Sport and Physical Activity*.

81. Shuggi, I., Galway, W., Shaw, E., Gaskins, C., Shaver, A., **Miller, M.**, Oh, H., & Gentili, R. (2020). Mental workload, performance and psychological processes under various levels of team interdependence. *Virtual presentation delivered at the Annual Meeting of the North American Society for the Psychology of Sport and Physical Activity*.

80. Thomas, J., Fawver, B., Taylor, S., **Miller, M.**, Williams, A. M., & Lohse, K. (2020). Do error estimations drive learning effects during randomized practice conditions? *Virtual presentation delivered at the Annual Meeting of the North American Society for the Psychology of Sport and Physical Activity*.

79. Brush, C., Foti, D., **Miller, M.**, Bocchine, A., Muniz, K., Gooden, & Alderman, B. (2019). Acute aerobic exercise boosts emotional reactivity to pleasant images but does not impact reward processing. *Poster presented at the Annual Meeting of the Society for Psychophysiological Research*, Washington, D. C.

78. Shaw, E., Rietschel, J., Kahl, S., Hendershot, B., Pruziner, A., Wolf, E., Dearth, C., **Miller, M.**, Hatfield, B., & Gentili, R. (2019). Mental workload assessment during the performance of ecologically-valid tasks under various cognitive-motor demands. *Poster presented at the Annual Meeting of the Society for Psychophysiological Research*, Washington, D. C.

77. Cheval, B.┼, Boisgontier, M. P.┼, Bacelar, M. F. B., Feiss, R., & **Miller, M. W.** (2019). Opportunities to sit and stand trigger equivalent reward-related brain activity. *Poster presented at the Annual Meeting of the Society for Psychophysiological Research*, Washington, D. C.

76. Cheval, B.┼, Boisgontier, M.┼, Bacelar, M., Feiss, R., Zona, V., & **Miller, M**. (2019). Does lower energy expenditure increase reward pursuit and reward-related cerebral cortical activity? *Oral presentation delivered at the Annual Meeting of the North American Society for the Psychology of Sport and Physical Activity*, Baltimore, MD.

75. Bacelar, M.,Murphy, S., Legget, H., Lohse, K., & **Miller, M.** (2019). The effect of rewards and punishments on action selection and action execution. *Oral presentation delivered at the Annual Meeting of the North American Society for the Psychology of Sport and Physical Activity*, Baltimore, MD.

74. Daou, M., Rhoads, J.**,** Jacobs, T., Lohse, K., **Miller, M. W.** (2019). Does limiting pre-movement time during practice eliminate the benefit of practicing while expecting to teach? *Oral presentation delivered at the Annual Meeting of the North American Society for the Psychology of Sport and Physical Activity*, Baltimore, MD.

73. Rhoads, J., Hulebak, G., Sanstrom, P., Simpson, W., & **Miller, M. W.** (2019). *Poster presented at the Annual Meeting of the North American Society for the Psychology of Sport and Physical Activity*, Baltimore, MD.

72. Shaw, E. P., Rietschel, J. C., Shuggi, I. M., Xing, Y., Chen, S., **Miller, M. W.**, Hatfield, B. D., & Gentili, R. J. (2019). Cerebral cortical networking for mental workload assessment under various demands during dual-task walking in individuals with transtibial limb loss. *Oral presentation delivered at the Annual Meeting of the North American Society for the Psychology of Sport and Physical Activity*, Baltimore, MD.

71. Gaskins, C., Kontson, K. L., Shaw, E. P., Shuggi, I. M., Ayoub, M. J., Rietschel, J. C., **Miller, M. W.**, & Gentili, R. J. (2019). Cognitive-motor performance assessment during upper limb body powered bypass prosthesis performance under various conditions of challenge. *Poster presented at the Annual Meeting of the North American Society for the Psychology of Sport and Physical Activity*, Baltimore, MD.

70. Wilhelm, R., Lacey, M., Gable, P., & **Miller, M.** (2018). The influence of intrinsic motivation on beta-suppression and cognitive narrowing. *Poster presented at the Annual Meeting of the Society for Psychophysiological Research*, Quebec City, Canada.

69. Shaw, E., Rietschel, J., Hendershot, B., Pruziner, A., **Miller, M.**, Wolf, E., Dearth, C., Hatfield, B., & Gentili, R. (2018). A combined biomechanical and neurocognitive examination for cognitive workload assessment in individuals with lower-limb loss during dual-task walking. *Poster presented at the Annual Meeting of the Society for Psychophysiological Research*, Quebec City, Canada.

68. Rhoads, J. A., Bacelar, M., Daou, M., Valerius, W., Carter, B., Scaglione, L., Lohse, K. R., & **Miller, M. W.** (2018). Investigating whether resting EEG coherence between central midline and other sites across scalp topography predicts manual wheelchair skill acquisition and learning. *Poster presented at the Annual Meeting of the Society for Psychophysiological Research*, Quebec City, Canada.

67. Lohse, K. R., Daou, M., Valerius, W., Jones, M., & **Miller, M. W.** (2018). Exploring engagement in trial and error category learning: Comparing aggregate and single-trial event-related potentials. *Poster presented at the Annual Meeting of the Society for Psychophysiological Research*, Quebec City, Canada.

66. Daou, M., Hutchison, Z., Bacelar, M., Rhoads, J. A., Lohse, K. R., & **Miller, M. W.** (2018). Those who expect to teach cannot do under high pressure. *Oral presentation delivered at the Annual Meeting of the North American Society for the Psychology of Sport and Physical Activity*, Denver, CO.

65. Rhoads, J. A., Bacelar, M., Daou, M., Valerius, W., Carter, B., Scaglione, L., Lohse, K. R., & **Miller, M. W.** (2018). Improving acquisition of manual wheelchair skills: An EEG study using motor learning principles. *Oral presentation delivered at the Annual Meeting of the North American Society for the Psychology of Sport and Physical Activity*, Denver, CO.

64. Lohse, K. R., Pathania, A., Leiker, A., & **Miller, M. W.** (2018). Measuring cortical 1/f noise in a motor learning paradigm: Effects of difficulty, performance, and time. *Oral presentation delivered at the Annual Meeting of the North American Society for the Psychology of Sport and Physical Activity*, Denver, CO.

63. Pathania, A., Leiker, A., Euller, M., **Miller, M. W.**, & Lohse, K. R. (2018). Exploring the neurophysiological mechanisms determining the regulation of difficulty in self-controlled practice. *Oral presentation delivered at the Annual Meeting of the North American Society for the Psychology of Sport and Physical Activity*, Denver, CO.

62. Dyke, F. B., Rhoads, J. A., Hall, T., & **Miller, M. W.** (2018). Trait mindfulness as a moderator of green exercise and attention restoration. *Poster presented at the Annual Meeting of the North American Society for the Psychology of Sport and Physical Activity*, Denver, CO.

61. Gaskins, C., Kontson, K. L., Shaw, E. P., Shuggi, I. M., Ayoub, M. J., Rietschel, J. C., **Miller, M. W.**, & Gentili, R. J. (2018). Mental workload assessment during simulated upper extremity prosthetic performance under various conditions of cognitive and motor challenge. *Poster presented at the Annual Meeting of the North American Society for the Psychology of Sport and Physical Activity*, Denver, CO.

60. Jaquess, K., Lo, L., Oh, H., Lu, C., Ginsberg, A., Tan, Y. Y., Lohse, K., **Miller, M.**, Hatfield, B., & Gentili, R. (2018). Cortical correlates underlying changes in mental workload and motor performance during multiple training sessions under various levels of challenge. *Poster presented at the Annual Meeting of the North American Society for the Psychology of Sport and Physical Activity*, Denver, CO.

59. Shaw, E. P., Rietschel, J. C., Shuggi, I. M., Xing, Y., Hendershot, B. D., Pruziner, A. L., Chen, S., **Miller, M. W.**, Hatfield, B. D., & Gentili, R. J. (2018). Evaluation of cerebral cortical networking as a measure of cognitive workload during dual-task walking under various levels of challenge. *Poster presented at the Annual Meeting of the North American Society for the Psychology of Sport and Physical Activity*, Denver, CO.

58. Gaskins, C., Kontson, K., Shaw, E. P., Shuggi, I. M., Ayoub, M. J., Rietschel, J. C., **Miller, M. W.**, & Gentili, R. J. (2018). Mental workload assessment during simulated upper extremity prosthetic performance. *Poster presented at American Congress of Rehabilitation Medicine*, Dallas, TX.

57. Dyke, F. B., Rhoads, J. A., O’Neil, J., & **Miller, M. W.** (2017). The effects of nature images on directed attention: an ERP experiment. *Poster presented at the Annual Meeting of the Society for Psychophysiological Research*, Vienna, Austria.

56. Daou, M., Lohse, K. R., & **Miller, M. W.** (2017). Examining motor preparatory neural activity when practicing with the expectation of teaching. *Poster presented at the Annual Meeting of the Society for Psychophysiological Research*, Vienna, Austria.

55. Grand, K. F., Daou, M., Lohse, K. R., & **Miller, M. W.** (2017). Investigating the mechanisms underlying the effects of an incidental choice on motor learning. *Poster presented at the North American Society for the Psychology of Sport and Physical Activity’s Annual Meeting*, San Diego, CA.

54. Daou, M., Lohse, K. R., & **Miller, M. W.** (2017). Employing the Reflective-Impulsive Model to predict spontaneous physical activity behavior. *Oral presentation delivered at the North American Society for the Psychology of Sport and Physical Activity’s Annual Meeting*, San Diego, CA.

53. Daou, M., Rhoads, J. A., Lohse, K. R., & **Miller, M. W.** (2017). Expecting to teach enhances motor learning and information processing during practice. *Oral presentation delivered at the North American Society for the Psychology of Sport and Physical Activity’s Annual Meeting*, San Diego, CA.

52. Rhoads, J. A., Daou, M., Dyke, F. B., Lohse, K. R., & **Miller, M. W.** (2017). Examining a motor learning paradigm: To teach or not to teach. *Poster presented at the North American Society for the Psychology of Sport and Physical Activity’s Annual Meeting*, San Diego, CA.

51. Lohse, K. R., Daou, M., Rhoads, J. A., Meadows, C. C., & **Miller, M. W.** (2016). An exploratory analysis of the effects of task engagement on feedback processing: An ERP investigation. *Poster presented at the Society for Psychophysiological Research’s Annual Meeting*, Minneapolis, MN.

50. Meadows, C. C.┼, Gable, P. A.┼, Lohse, K. R., & **Miller, M. W.** (2016). The effects of reward magnitude on reward processing: An averaged and single-trial event-related potential study. *Poster presented at the Society for Psychophysiological Research’s Annual Meeting*, Minneapolis, MN.

49. Dyke, F. B., Buchanan, T. L., Crawford, B., & **Miller, M. W.** (2016).Does a single bout of ‘green exercise’ facilitate engagement in future exercise behavior? A one-year pilot study. *Poster presented at the North American Society for the Psychology of Sport and Physical Activity Annual Meeting*, Montreal, Canada.

48. Daou, M., Buchanan, T. L., Lindsey, K. R., Lohse, K. R., & **Miller, M. W.** (2016). Expecting to teach enhances learning: Evidence from a motor learning paradigm. *Poster presented at the North American Society for the Psychology of Sport and Physical Activity Annual Meeting*, Montreal, Canada.

47. Iso-Ahola, S. E., Dotson, C. O., Jagodinsky, A. E., Clark, L. C., Smallwood, L. L., Wilburn, C., Weimar, W. H., & **Miller, M. W.** (2016). Improving performance by anchoring movement and “nerves”. *Poster presented at the North American Society for the Psychology of Sport and Physical Activity Annual Meeting*, Montreal, Canada.

46. Lohse, K. R., Leiker, A., Bruzi, A., Wegman, R., Nelson, M., & **Miller, M. W.** (2016). Self-selected difficulty, engagement, and intrinsic motivation in an interactive computer game: An exploratory analysis. *Poster presented at the North American Society for the Psychology of Sport and Physical Activity Annual Meeting*, Montreal, Canada.

45. Lohse, K. R. ┼, **Miller, M. W.** ┼, Grand, K. F., Robinson, J. L. (2016). Neural correlates of attentional focus: A high-resolution fMRI study. *Poster presented at the North American Society for the Psychology of Sport and Physical Activity Annual Meeting*, Montreal, Canada.

44. Meadows, C. C.┼, Gable, P. A**.┼**, Lohse, K. R., & **Miller, M. W.** (2016). Motivation and motor-preparatory brain activity independently affect premotor time. *Poster presented at the North American Society for the Psychology of Sport and Physical Activity Annual Meeting*, Montreal, Canada.

43. **Miller, M. W.**┼, Lohse, K. R.┼, Grand, K. F., & Robinson, J. L. (2016). Neural correlates of choking under pressure: A high-resolution fMRI study. *Oral presentation delivered at the North American Society for the Psychology of Sport and Physical Activity Annual Meeting*, Montreal, Canada.

42. Leiker, A., Bruzi, A., Nelson, M., Wegman, R., **Miller, M. W.**, Lohse, K. R. (2016). The effects of self-controlled difficulty progression on engagement and learning in a computer gaming task. *Poster presented at the North American Society for the Psychology of Sport and Physical Activity Annual Meeting*, Montreal, Canada.

41. Robinson, J. L., Denney, T. S., **Miller, M.**, Lohse, K., Grand, K., Kirby, L. A. J., Murphy, J. E., Graap, K., & Macy, A. (2016). Psychophysiological recording in ultra high field environments: A 7T investigation. *Poster presented at the International Society for Magnetic Resonance in Medicine Ultra High Field MRI Workshop*, Heidelberg, Germany.

40. Meadows, C. C.┼, Gable, P. A**.┼**, Lohse, K. R., & **Miller, M. W.** (2016). Potential reward modulates feedback processing: An event-related potential study. *Poster presented at the Cognitive Neuroscience Society Annual Meeting*, New York, NY.

39. Kirby, L. A., **Miller, M.**, Lohse, K., Grand, K., Murphy, J. E., Graap, K., Macy, A., & Robinson, J. L. (2016). Choking under pressure: A neuropsychophysiological investigation at 7T. *Poster presented at the Annual Meeting for the Social and Affective Neuroscience Society*, New York, NY.

38. Shaw, E. P., Rietschel, J. C., McDonald, C. G., **Miller, M. W.**, Gentili, R. J., & Hatfield, B. D. (2015). A real-time objective assessment of cognitive workload during ambulation. *Poster presented at the Society for Neuroscience’s Annual Meeting*, Chicago, IL.

37. Grand, K., Bruzi, A. T., Dyke, F. B., Godwin, M. M., Leiker, A. M., Thompson, A. G., Buchanan, T. L., Daou, M., Lohse, K. R., & **Miller, M. W.** (2015). Feedback-related negativity predicts generalization of a newly learned motor skill. *Poster presented at the Society for Psychophysiological Research’s Annual Meeting*, Seattle, WA.

36. Robinson, J. L., **Miller, M. W.**, Lohse, K. Grand, K., Hill, A. C., Murphy, J. E., Kirby, L. A. J., Graap, K., & Macy, A. (2015). Psychophysiological measures at ultra high field: A 7T fMRI study of motor performance under pressure. *Poster presented at the Society for Psychophysiological Research’s Annual Meeting*, Seattle, WA.

35. Oh, H., Hatfield, B. D., Jacquess, K. J., Lo, L., Tan, Y. Y., Prevost, M. C., Mohler, J. M., Postlethwaite, H., Rietschel, J. C., **Miller, M. W.**, Blanco, J. A., Chen, S., & Gentili, R. J. (2015). A composite cognitive state and load assessment system in pilots under various task demands. *Paper verbally presented at the 17th Conference on Human-Computer Interaction*, Los Angeles, CA.

34. Grand, K., Bruzi, A. T., Dyke, F. B., Godwin, M. M., Leiker, A. M., Thompson, A. G., Buchanan, T. L., Daou, M., Lohse, K. R., & **Miller, M. W.** (2015). Why self-controlled feedback enhances motor learning: Answers from electroencephalography and self-report questionnaire. *Oral presentation delivered at the North American Society for the Psychology of Sport and Physical Activity Annual Meeting*, Portland, OR.

33. Dyke, F. B., Buchanan, T. L., Crawford, B., & **Miller, M. W.** (2015).Does a single bout of ‘green exercise’ enhance the affective experience and future exercise behavior? A pilot study. *Poster presented at the North American Society for the Psychology of Sport and Physical Activity Annual Meeting*, Portland, OR.

32. Lohse, K. R., Buchanan, T. L., & **Miller, M. W.** (2015). Under-powered and over-worked: Problems with data in motor learning studies. *Oral presentation delivered at the North American Society for the Psychology of Sport and Physical Activity Annual Meeting*, Portland, OR.

31. Robinson, J. L., **Miller, M. W.**, Lohse, K., Beyers, R., Grand, K.… Graap, K. (2015). Neuropsychophysiological mapping: Concurrent psychophysiological recording and fMRI at 7T. *Poster presented at the Annual Meeting of the Organization for Human Brain Mapping*, Honolulu, HI.

30. Grand, K. F., Bruzi, A. T., Dyke, F. B., Godwin, M. M., Leiker, A. M., Thompson, A. G., Buchanan, T. L., Daou, M., Lohse, K. R., & **Miller, M. W.** (2015). Feedback-related negativity predicts adaptation of a newly learned skill to novel task constraints. *Poster presented at the Cognitive Neuroscience Society Annual Meeting*, San Francisco, CA.

29. Gentili, R., Rietschel, J., Jaquess, K., Lo, L., Prevost, M., **Miller, M.**, Mohler, J., Oh, H., Tan, Y. Y., Hatfield, B. (2014). Brain biomarkers based assessment of cognitive workload in pilots under various task demands. *Paper presented at the IEEE Engineering in Medicine and Biology Society Conference*, Chicago, IL.

28. Schmitt, K. R. B., Badawy, A. A., Kramer, S. S., Hrapczynski, K., Larsen, E. A., Taylor, A. C., Andrew, A. A., Dougherty, M., **Miller, M. W.**, Robertson, B., Williams, A. Y., & Benson, S. S. (2014). A failing grade for CS faculty: Comparing faculty perceptions of student expectations and reality. *Paper presented at the Consortium for Computing Sciences in Colleges Eastern Regional Conference*, York, PA.

27. Dyke, F., Leiker, A., Grand, K., Godwin, M. M., Thompson, A. G., Rietschel, J. C., McDonald, C. G., & **Miller, M. W.** (2014). The efficacy of auditory probes in indexing cognitive workload is dependent on stimulus complexity and magnitude of attentional orienting. *Poster presented at the Annual Meeting of the Society for Psychophysiological Research*, Atlanta, GA.

26. Dyke, F. **┼**, Godwin, M. M. **┼**, Goel, P., Rehm, J., Rietschel, J. C., Hunt, C., & **Miller, M. W.** (2014). Cognitive processes associated with novices’ best motor performances: An electroencephalographic investigation. *Poster presented at the Annual Meeting of the Society for Psychophysiological Research*, Atlanta, GA.

25. Robinson, J. L., **Miller, M. W.**, Beyers, R., Grand, K., Kirby, L. A. J….& Graap, K. (2014). Neurophysiological mapping: Concomitant psychophysiological recording and submillimeter functional magnetic resonance imaging (fMRI) at 7T. *Poster presented at the Annual Meeting of the Society for Psychophysiological Research*, Atlanta, GA.

24. Jacquess, K. J., Rietschel, J. C., Lo, L., **Miller, M. W.**, Oh, H., Tan, Y. Y… Gentili, R. J. (2014). Objective assessment of cognitive workload during varying degrees of task difficulty using a dry EEG system: Relevance for ecological validity. *Poster presented at the Annual Meeting of the Society for Neuroscience*, Washington, D. C.

23. Hatfield, B. D., Gentili, R. J., Jaquess, K. J., Lo, L., **Miller, M. W.**, Mohler, J. M… Tan, Y. Y. (2014). Objective assessment of cognitive workload and attentional reserve in pilots during varying degrees of task difficulty and mental stress. *Poster presented at the Annual Meeting of the Society for Neuroscience*, Washington, D. C.

22. Rietschel, J. C.**┼**, Godwin, M. M.**┼**, Dyke, F., Buchanan, T., Harrington, S., Hunt, C., Jha, A. P., & **Miller, M. W.** (2014). Dispositional mindfulness is positively related to physical force consistency, but eight minutes of mindful breathing is not. *Poster presented at the North American Society for the Psychology of Sport and Physical Activity Annual Meeting*, Minneapolis, MN.

21. **Miller, M. W.┼**, Baker, R. E.┼, & Shannon, D. M. (2014). Coaches’ idealized influence predicts their ability to develop successful collegiate athletic teams from teams previously lacking success. *Poster presented at the North American Society for the Psychology of Sport and Physical Activity Annual Meeting*, Minneapolis, MN.

20. Palmer, K. K.,Irwin, J. M.,Monroe, B. A.,**Miller, M. W.**, & Robinson, L. E. (2014). Children's executive function is correlated with their locomotor skills. *Poster presented at the North American Society for the Psychology of Sport and Physical Activity Annual Meeting*, Minneapolis, MN.

19. Leiker, A., Grand, K., Thompson, A. G., Dyke, F., Godwin, M. M., Rietschel, J. C., McDonald, C. G., & **Miller, M. W.** (2014). Comparing the orienting of attention to two types of task-irrelevant auditory stimuli under varying levels of task load: Implications for measuring attentional reserve. *Poster presented at the Cognitive Neuroscience Society Annual Meeting*, Boston, MA.

18. Dyke, F.**┼**, Godwin, M. M.**┼**, Goel, P., Rehm, J., Rietschel, J. C., Hunt, C., & **Miller, M. W.** (2013). Advice for the casual athlete’s mind: Brain activity associated with nonexpert golfers’ best putts. *Poster presented at the Annual Meeting of the Society for Neuroscience*, San Diego, CA.

17. Dyke, F.**┼**, Godwin, M. M.**┼**, Rietschel, J. C., McDonald, C. G., & Miller, M. W. (2013). Capturing attentional resources: Comparing the effectiveness of two types of task-irrelevant stimuli in indexing attentional reserve. *Poster presented at the Annual Meeting of the Society for Psychophysiological Research*, Florence, Italy.

16. Badawy, A. A., Andrews, A., Dougherty, M., Hrapczynski, K., Larsen, E., **Miller, M. W.**, Robertson, B., Schmitt, K. R. B., Taylor, A., Kramer, S., & Benson, S. (2013). Expectations of computing and other STEM students: A comparison for different class levels, or (CSE ≠ STEM – CSE) ǀ Class Level. *Oral presentation delivered at the 2013 Frontiers in Education Conference*, Oklahoma City, OK.

15. Rietschel, J. C.┼,& **Miller, M. W.**┼(2013).The development and application of a novel physiological metric of cognitive workload. *Paper verbally presented at the 15th Conference on Human-Computer Interaction,* Las Vegas, NV.

14. Rietschel, J. C., Hunt, C., Godwin, M. M., Dyke, F., Jha, A. P., & **Miller, M. W.** (2013). Dispositional mindfulness is positively related to the quality of motor performance. *Poster presented at the North American Society for the Psychology of Sport and Physical Activity Annual Meeting*, New Orleans, LA.

13. Palmer, K. K.**┼**, **Miller, M. W.┼**, & Robinson, L. E. (2013). Acute physical activity enhances preschoolers’ ability to sustain attention. *Poster presented at the North American Society for the Psychology of Sport and Physical Activity Annual Meeting*, New Orleans, LA.

12. Iso-Ahola, S. E., & **Miller, M. W.** (2013). Nonconscious and conscious priming of a complex behavior: Exercise. *Poster presented at the Annual Meeting of the Society for Personality and Social Psychology*, New Orleans, LA.

11. **Miller, M. W.**, Pressaco, A., Groman, L. J., Bur, S., Rietschel, J. C., Gentili, R. J., McDonald, C. G., Iso-Ahola, S. E., & Hatfield, B. D. (2012). The effect of team environment on arousal and cerebral cortical activation. *Poster presented at the Annual Meeting of the Society for Neuroscience*, New Orleans, LA.

10. Rietschel, J. C., McDonald, C. G., Goodman, R. N., **Miller, M. W.**, Jones-Lush, L. M., Wittenberg, G. F., & Hatfield, B. D. (2012). Psychophysiological investigation of attentional processes during motor skill learning. *Poster presented at the Annual Meeting of the Society for Neuroscience*, New Orleans, LA.

9. **Miller, M. W.**┼, Rietschel, J. C.┼, McDonald, C. G., & Hatfield, B. D. (2012). Perception of teammate competence during task performance alters neurophysiological correlate of motivation orientation. *Poster presented at the Annual Meeting of the Society for Social Neuroscience*, New Orleans, LA.

8. **Miller, M. W.**, Pressaco, A., Groman, L. J., Bur, S., Rietschel, J. C., Gentili, R. J., McDonald, C. G., Iso-Ahola, S. E., & Hatfield, B. D. (2012). The impact of team environment on attentional reserve. *Poster presented at the Annual Meeting of the Society for Psychophysiological Research*, New Orleans, LA.

7. Andrews, A., Badawy, A. A., Dougherty, M., Hrapczynski, K., Larsen, E., **Miller, M. W.**, Robertson, B., Schmitt, K. R. B., Taylor, A., Kramer, S., & Benson, S. (2012). Analysis of student and faculty course expectations. *Oral presentation delivered at the 2012 Lilly Conference on College & University Teaching*, Washington, D.C.

6. **Miller, M. W.**, Pressaco, A., Groman, L. J., Bur, S., Rietschel, J. C., Gentili, R. J., McDonald, C. G., Iso-Ahola, S. E., & Hatfield, B. D. (2012). The effect of team environment on the allocation of attentional resources to novel stimuli. *Poster presented at the Annual Meeting of the Social and Affective Neuroscience Society*, New York, NY.

5. Rietschel, J. C.┼, **Miller, M. W.**┼, Gentili, R. J., Goodman, R. N., McDonald, C. G., & Hatfield, B. D. (2011). Cerebral-cortical networking and activation increase as a function of task-difficulty. *Poster presented at the Society for Neuroscience Annual Meeting*, Washington, D.C.

4. **Miller, M. W.**, Groman, L. J., Rietschel, J. C., McDonald, C. G., Iso-Ahola, S. E., & Hatfield, B. D. (2011). The effects of team environment on attentional resource allocation and cognitive workload. *Oral presentation delivered at the Mid-Atlantic Regional Chapter of the American College of Sports Medicine Conference*, Harrisburg, PA.

3. **Miller, M. W.**┼, Rietschel, J.┼, McDonald, C., Pangelinan, M., Bush, L., & Hatfield, B. (2010). EEG assessment of cognitive workload under ecologically valid conditions. *Poster presented at the Society for Neuroscience Annual Meeting,* SanDiego, CA.

2. Costanzo, M. E., Beatty, G., Breeden, A., Fawver, B., Hancock, G., Janelle, C., **Miller, M.,** Oldham, J., Russell, B., Van Meter, J., & Hatfield, B. D. (2010).Examination of brain processes underlying emotion regulationwithin a stressresilient population. *Poster presented at the Annual Meeting of the Social &* *Affective Neuroscience Society*, Chicago, IL.

1. Kelly-Woessner, A., & **Miller, M. W.** (2005).Personality and participation: How psychological predispositions impact civic engagement. *Paper presented at the International Society of Political Psychology Annual Meeting,* Toronto, Canada.

### Grants and Contracts

#### Funded (Total Costs of Projects = $1,792,024.80)

9. **Funding Agency**: Federal Aviation Association

**Role**: Co-Principal Investigator

**Dates**: 2019 – 2021

**Title**: Retooling pilot workforce development for digital natives

**Total Costs**: $595,860

**Description**: The purpose of this research is to provide scientific and technical data on effective training and checking methods for the current and projected pilot workforce, with emphasis on pilot information management, decision-making, and command judgment. These data will support updates to guidance for FAA inspectors and operators.

8. **Funding Agency**: Auburn University PAIR Grants Program

**Role**: Co-Investigator

**Dates**: 2018 – 2021

**Title**: Center for Neuroscience Initiative

**Total Costs**: $637,500

**Description**: Auburn researchers will work to mitigate against mental, neurological and substance use disorders, which make up a substantial proportion of the world’s disease burden. A team of experts in chemistry, physiology, development, degeneration, and imaging of the brain will collaborate to develop a neuroscience center to increase fundamental knowledge about the brain and nervous system and to use that knowledge to reduce the burden of neurological disease.

7. **Funding Agency**: Auburn University Intramural Grants Program

**Role**: Co-Principal Investigator

**Dates**: 2017 – 2019

**Title**: Enhancing learning of an assistive device: manual wheelchair use

**Total Costs**: $40,000

**Description**: The first aim of our project is to investigate whether expecting to teach enhances learning how to operate a manual wheelchair. The second aim of our project is to employ neurophysiological measures in attempt to expose the mechanisms underlying the expecting to teach effect.

6. **Funding Agency**: Maximum Human Performance (MHP)

**Role**: Principal Investigator

**Dates**: 2016

**Title**: Effect of MHP’s new pre-workout to enhance focus, concentration, mood, energy, cognitive and athletic performance

**Total Costs**: $22,976

**Description**: The project investigates whether a supplement developed by MHP enhances mood, cognitive function, brain activity, and athletic performance.

5. **Funding Agency**: Lockheed Martin

**Role**: Co-Investigator

**Dates**: 2014 – 2015

**Title**: Objective assessment of cognitive workload in flight tasks as a result of flight simulation demand and expertise

**Total Costs**: $150,000

**Description**: The aim of the project is to provide a valid biomarker of cognitive workload, derived from electroencephalography (EEG), eye tracking, and cardiovascular activity under conditions of varying mental challenge, which is robust for employment in operational environments.

4. **Funding Agency**: Auburn University College of Education Seed Grants Program

**Role**: Principal Investigator

**Dates**: 2013 – 2014

**Title**: Examining the neural correlates of attention orientation while performing under pressure

**Total Costs**: $4,688.80

**Description**: To employ fMRI to characterize neural correlates of internal and external orientations of attention and to test the hypothesis that attention becomes internally oriented when one performs under psychological pressure.

3. **Funding Agency**: Department of Defense

**Role**: Co-Investigator

**Dates**: 2013 – 2014

**Title**: Volunteer investigations for mounted and head-supported mass in dismounted operations.

**Total Costs**: $91,000

**Description**: The goal of this research is to assess the effects of transportation in various warfighter vehicles over various terrains on warfighters’ physiology and psychology.

2. **Funding Agency**: Department of Defense

**Role**: Consultant

**Dates**: 2012 – 2014

**Title**: Biomechanical variability with changes in cognitive demand during ambulation for service members with lower limb amputations

**Total Costs**: $150,000

**Description**: The purpose of this study is to determine (a) the cognitive load imposed on Service Members with lower limb amputations while engaging in a real-world scenario, and (b) the biomechanical adaptations that occur with increasing cognitive load.

1. **Funding Agency**: Lockheed Martin

**Role**: Co-Investigator

**Dates**: 2012 – 2013

**Title**: Cognitive workload

**Total Costs**: $100,000

**Description**: The general purpose of the research plan is to facilitate effective decision-making and cognitive-motor performance of human operators and to provide a valid and robust biomarker of attention reserve, derived from electroencephalography (EEG), under conditions of varying cognitive workload.

#### Not Funded (Total Costs of Projects = $ 5,035,242.70)

9. **Funding Agency**: National Science Foundation

**Role**: Co-Principal Investigator

**Dates**: 2018 – 2021

**Title**: Measuring and modelling age-related changes in reinforcement learning

**Total Costs**: $690,360

**Description**: The first goal is to examine the relationship between the reward positivity component

of the electroencephalography-derived event-related potential, adaptation, and learning across the

life-span. The second goal is to statistically model how individual differences in discrete cognitive

functions affect reinforcement learning across the life-span.

8. **Funding Agency**: Office of the Director of National Intelligence

**Role**: Key Personnel

**Dates**: 2017 – 2020

**Title**: Developing biometric assessments of job performance in dynamic contexts

**Total Costs**: $99,230.00 (costs associated with my effort)

**Description**: My effort will involve examining the effects of interpersonal trust on biomarkers of individuals’ cognitive workload while they engage in visuomotor tasks of varying difficulty.

7. **Funding Agency**: Maximum Human Performance

**Role**: Principal Investigator

**Dates**: 2017

**Title**: Effect of MHP’s new pre-workout to enhance sport skill learning

**Total Costs**: $20,000

**Description**: This clinical trial will examine and quantify the ability of MHP’s new pre-workout supplement to enhance sport skill learning.

6. **Funding Agency**: Auburn University Intramural Grants Program

**Role**: Co-Principal Investigator

**Dates**: 2015 – 2016

**Title**: The effects of dispositional mindfulness on emotional eating

**Total Costs**: $17,679.00

**Description**: The project investigates the relationship between dispositional mindfulness and (1) emotional eating as well as (2) neural correlates of food processing during psychological stress.

5. **Funding Agency**: National Collegiate Athletic Association

**Role**: Co-Principal Investigator

**Dates**: 2014 – 2015

**Title**: Investigating the effects of a mindfulness-based stress reduction course on student-athletes’ well-being and mental health

**Total Costs**: $40,919

**Description**: The project proposes to create and implement a mindfulness-based stress reduction course specifically designed for student-athletes, and research its effects on their well-being and mental health.

4. **Funding Agency**: National Institute for Disability Rehabilitation and Research

**Role**: Co-Investigator

**Dates**: 2014 – 2018

**Title**: Health and function outcomes of adapted sport participation

**Total Costs**: $2,462,649.00

**Description**: The project will focus on the effects of adapted sport on the health and function of people with disabilities. The primary concern of this project is determining the potential benefits of integrating people with and without disabilities in sport.

3. **Funding Agency**: Auburn University Intramural Grants Program

**Role**: Co-Principal Investigator

**Dates**: 2014 – 2015

**Title**: Establishing guidelines for step-count programs and understanding program adherence decisions

**Total Costs**: $54,404.04

**Description**: The objective of the proposed work is to establish step-count program guidelines and elucidate the mechanisms underlying program adherence decisions.

2. **Funding Agency**: Auburn University Intramural Grants Program

**Role**: Co-Principal Investigator

**Dates**: 2013 – 2015

**Title**: Examining the neural correlates of attention orientation while performing under pressure

**Total Costs**: $50,021.66

**Description**: To employ simultaneous EEG-fMRI to characterize neural correlates of internal and external orientations of attention and to test the hypothesis that attention becomes internally oriented when one performs under psychological pressure.

1.**Funding Agency**: Department of Education

**Role**: Co-Investigator

**Dates**: 2013 – 2017

**Title**: Moving to achieve: The role of physical education and physical activity policies to academic achievement

**Total Costs**: $1,600,000

**Description**: The purpose of this project is to discover how the implementation of school physical activity policies, students’ physical activity behaviors and fitness levels relate to academic achievement and neurocognitive function over time.

## Teaching and Mentorship

In no order of importance, my objectives as a teacher are to cultivate students’ motivation for learning, effectively convey course content, foster students’ critical thinking skills, and raise students’ awareness about issues of diversity, equity, and inclusiveness. Whereas the importance of effectively conveying course content is obvious, it may be less appreciated that to be receptive to content delivery, students must be motivated to learn. My experience has been that if students are motivated to learn subject matter, then their learning of that material will be enhanced, and this observation is supported by research. Although motivating students to learn and effectively transmitting course content is important, helping them to develop critical thinking skills is equally crucial. To this end, I describe the research that yielded the course content and encourage students to use inductive reasoning to link the research to the content. Importantly, I describe shortcomings in research and urge students to recognize differences in research quality. By facilitating students’ critical thinking skills, I hope to make them better consumers of information in, and more importantly, beyond, the classroom. Finally, I strive to increase students’ awareness about issues of diversity, equity, and inclusiveness by considering these topics in each interaction I have with students and devoting course content to them. For example, in sport psychology, I teach a unit about prejudice, stereotypes, and discrimination, and, in motor learning and performance, I describe how reaction time has been used to reveal implicit bias toward people from marginalized groups. By making students aware of issues with inclusiveness, equity, and diversity, I hope to encourage them to work toward a kinder and more just world.

### Mentorship

#### Visiting Faculty

2014 Alessandro T. Bruzi, Federal University of Lavras, Brazil

#### Doctoral Students

2019 – Daniel A. R. Cabral

2019 – Juliana O. Parma

* + - **Awards**: Auburn University This is Research First Place (Graduate Level, Human Sciences, Social Sciences, Creative Arts, and Humanities, 2021)

2018 – Mariane F. B. Bacelar

* + - **Awards**: Auburn University Outstanding Kinesiology Graduate Student (2021 – 2022); *Journal of Motor Learning and Development*’sExcellence in Research Award (2020);Auburn University College of Education G. Dennis Wilson Scholarship (2020 – 2021); Auburn University College of Education Dean’s Circle (2019 – 2020)

2015 – 2019 Jence A. Rhoads

* + - **Awards**: Auburn University This is Research First Place (Graduate Level, College of Education, 2018); Auburn University College of Education Dean’s Circle (2017 – 2018)
    - **Dissertation Title**: Distinguishing the effects of verbalizing a skill on performance and learning in novice and skilled populations
    - **Initial Placement**: Adjunct Professor, School of Kinesiology, Auburn University

2014 – 2018 Marcos Daou

* **Awards**: Auburn University Graduate School Distinguished Dissertation (Social Sciences, 2018); Auburn University College of Education Alma Holladay Scholarship (2017 – 2018); North American Society for the Psychology of Sport and Physical Activity Outstanding Student Paper (Motor Learning and Control, 2017)
* **Dissertation Title**: The effects of practicing a motor skill with the expectation of teaching it: Benefits to skill learning, potential underlying mechanisms, and effects on skill performance under psychological pressure
* **Initial Placement**: Assistant Professor, Department of Kinesiology, Coastal Carolina University

2013 – 2017 Ford B. Dyke

* **Awards**: Auburn University This is Research Week First Place (Graduate Level, Social Sciences and Humanities, 2015); Auburn University College of Education G. Dennis Wilson Scholarship (2013 – 2014); Auburn University Research Week Second Place (Graduate Level, Sciences, 2013)
* **Dissertation Title**: Trait mindfulness as a moderator of green exercise and attention
  + - **Initial Placement**: Assistant Clinical Professor, School of Kinesiology, Auburn University

2013 – 2016 Maurice M. Godwin—**degree not completed**

* + - **Awards**: Auburn University Presidential Graduate Opportunity Program (2013 – 2016); Auburn University College of Education Alma Holladay Scholarship (2014 – 2015); Federation of American Societies for Experimental Biology Maximizing Access to Research Careers Travel Award (2013)
    - **Initial Placement**: Assistant Professor, California State University, San Bernardino

2013 – 2016 Kirk F. Grand

* + - **Dissertation Title**: Red or blue: Does the choice of hue influence the way you learn the things you do? A mechanistic account of the effects of incidental choice on motor learning
    - **Initial Placement**: Adjunct Professor, School of Kinesiology, Auburn University

2013 – 2016 Andrew G. Thompson

* + - **Dissertation Title**: The influence of dispositional mindfulness on state anxiety and motor choking under pressure
    - **Initial Placement**: Post-Doctoral Researcher, Tufts University/U.S. Army’s Natick Soldier Research Development and Engineering Center

#### Masters Students

2017 – 2018 Mariane F. B. Bacelar

* + - **Awards**: Auburn University This is Research First Place (Graduate Level, College of Education, 2018)

2013 – 2014 Amber Leiker

#### Undergraduate Research Fellows

2019 – 2020 Victoria Zona

* + - **Project Title**: Do non-exercisers spontaneously evaluate outdoor exercise images as more positive than indoor exercise images, and sport-based exercise images as more positive than gym-based exercise images?

2015 – 2016 Lily Clark

* + - **Project Title**: Can an instance of spontaneous physical activity be explained by the dual-process model?

2015 – 2016 Caroline Meadows

* + - **Project Title**: Does motor-preparatory brain activity mediate the relationship between motivation and motor performance?

#### Dissertation Committees

2021 – Sarah Brinkerhoff: Jaimie Roper, Kinesiology, Auburn University

2021 – Danielle Carabello: Melissa Pangelinan, Kinesiology, Auburn University

2020 – Taylor Langley: Marilyn Cornish, Special Education, Rehabilitation, and Counseling, Auburn University

2020 – Julia Sassi: Melissa Pangelinan, Kinesiology, Auburn University

2020 Brad McKay: Diane Ste-Marie, Human Kinetics, University of Ottawa (External Reviewer)

2019 – Kat Cler: Marilyn Cornish, Special Education, Rehabilitation, and Counseling, Auburn University

2019 – 2020 Robyn Feiss: Melissa Pangelinan, Kinesiology, Auburn University

2019 – 2020 Isabelle Shuggi: Rodolphe Gentili, Neuroscience and Cognitive Science, University of Maryland

2019 April Karlinsky: Nicola Hodges, Kinesiology, The University of British Columbia (External Reviewer)

2018 Megan Burton: David Umphress, Computer Science and Software Engineering, Auburn University (Reader)

2018 Justin Moody: Melissa Pangelinan, Kinesiology, Auburn University

2017 – 2018 Claire Bridges: Melissa Pangelinan, Kinesiology, Auburn University

2016 – 2017 Amber Leiker: Keith Lohse, Kinesiology, Auburn University

2016 Matt Davis: Ana Franco-Watkins, Psychological Sciences, Auburn University (Reader)

2016 Marc Jackson: Ana Franco-Watkins, Psychological Sciences, Auburn University (Reader)

2016 Justin Puder: Randolph Pipes, Special Education, Rehabilitation, and Counseling, Auburn University (Reader)

2014 Khalil Lee: David Pascoe, Kinesiology, Auburn University

2012 – 2013 Braden Romer: Wendi Weimar, Kinesiology, Auburn University

#### Masters Committees

2017 Julia Sassi: Melissa Pangelinan, Kinesiology, Auburn University

### Teaching

#### Auburn University

|  |  |  |  |
| --- | --- | --- | --- |
| Semester | Course | Enrollment | *M* Student Evaluation (1 – 6) |
| 2021 Fall | Motor Learning and Performance | 36 | 5.30 |
| 2021 Fall | Advanced Motor Learning and Performance | 9 | 5.27 |
| 2021 Summer | Advanced Sport Psychology | 10 | 5.83 |
| 2021 Summer | Advanced Motor Learning and Performance | 11 | 5.97 |
| 2021 Spring | Advanced Sport Psychology | 10 | 6.00 |
| 2020 Fall | Advanced Motor Learning and Performance | 15 | 5.64 |
| 2020 Fall | Motor Learning and Performance | 34 | 5.70 |
| 2020 Summer | Advanced Motor Learning and Performance | 10 | 5.30 |
| 2020 Summer | Advanced Sport Psychology | 11 | 5.83 |
| Spring 2020 | Motor Learning and Performance | 40 | 5.86 |
| Spring 2020 | Advanced Sport Psychology | 20 | 4.87 |
| Fall 2019 | Motor Learning and Performance | 40 | 5.64 |
| Fall 2019 | Advanced Motor Learning and Performance | 15 | 5.63 |
| Summer 2019 | Exercise and Sport Psychology | 19 | 4.77 |
| Summer 2019 | Advanced Motor Learning and Performance | 4 | 6.00 |
| Summer 2019 | Advanced Sport Psychology | 7 | 6.00 |
| Spring 2019 | Exercise and Sport Psychology | 32 | 5.17 |
| Spring 2019 | Advanced Sport Psychology | 16 | 5.53 |
| Fall 2018 | Motor Learning and Performance | 45 | 5.70 |
| Fall 2018 | Advanced Motor Learning and Performance | 16 | 5.29 |
| Summer 2018 | Exercise and Sport Psychology | 37 | 5.63 |
| Summer 2018 | Advanced Motor Learning and Performance | 12 | 5.54 |
| Summer 2018 | Advanced Sport Psychology | 13 | 5.21 |
| Spring 2018 | Motor Learning and Performance | 34 | 5.80 |
| Spring 2018 | Motor Learning and Performance | 34 | 5.57 |
| Fall 2017 | Motor Learning and Performance | 44 | 5.20 |
| Fall 2017 | Advanced Sport Psychology | 24 | 5.33 |
| Summer 2017 | Motor Learning and Performance | 10 | 5.61 |
| Summer 2017 | Advanced Sport Psychology | 14 | 5.69 |
| Spring 2017 | Physical Conditioning and Speed | 30 | 4.98 |
| Spring 2017 | Exercise and Sport Psychology | 39 | 5.70 |
| Fall 2016 | Physical Conditioning and Speed | 17 | 5.98 |
| Fall 2016 | Advanced Sport Psychology | 23 | 5.68 |
| Summer 2016 | Motor Learning and Performance | 16 | 5.80 |
| Summer 2016 | Advanced Sport Psychology | 15 | 5.47 |
| Spring 2016 | Exercise and Sport Psychology | 46 | 5.68 |
| Spring 2016 | Physical Conditioning and Speed | 25 | 5.76 |
| Fall 2015 | Physical Conditioning and Speed | 26 | 5.38 |
| Fall 2015 | Advanced Sport Psychology | 21 | 5.68 |
| Summer 2015 | Advanced Sport Psychology | 5 | 5.44 |
| Summer 2015 | Motor Learning and Performance | 21 | 5.86 |
| Summer 2015 | Exercise and Sport Psychology | 20 | 5.67 |
| Spring 2015 | Physical Conditioning and Speed | 28 | 5.63 |
| Spring 2015 | Event-Related Potentials | 10 | 5.96 |
| Fall 2014 | Physical Conditioning and Speed | 32 | 5.61 |
| Fall 2014 | Advanced Sport Psychology | 23 | 5.30 |
| Summer 2014 | Advanced Sport Psychology | 12 | 5.89 |
| Summer 2014 | Physical Conditioning and Speed | 5 | 5.72 |
| Summer 2014 | Advanced Motor Learning and Performance | 20 | 5.49 |
| Spring 2014 | Exercise and Sport Psychology | 34 | 5.74 |
| Spring 2014 | Physical Conditioning and Speed | 17 | 5.72 |
| Fall 2013 | Physical Conditioning and Speed | 33 | 5.33 |
| Fall 2013 | Advanced Sport Psychology | 19 | 5.66 |
| Fall 2013 | Advanced Sport Psychology | 20 | 5.42 |
| Summer 2013 | Motor Learning and Performance | 23 | 5.93 |
| Summer 2013 | Advanced Motor Learning and Performance | 25 | 5.17 |
| Spring 2013 | Psychophysiology of Motor Performance | 4 | 5.76 |
| Spring 2013 | Neuromotor Control | 34 | 4.59 |
| Fall 2012 | Advanced Sport Psychology | 23 | 5.17 |

#### University of Maryland

Beginning Basketball; Beginning Bowling; Beginning Weight Training; Intermediate Basketball; Intermediate Bowling; Intermediate Jogging; Intermediate Volleyball; Intermediate Weight Training; Physiology of Exercise Lab

## Service

### Academic

2021 – [Advocates and Allies Program](https://www.ndsu.edu/forward/advocates_and_allies/) Member

2021 Promotion and Tenure External Reviewer, Texas Tech University

2021 Student Awards Committee, North American Society for the Psychology of Sport and Physical Activity

2020 – Diversity Committee, College of Education, Auburn University

2014 – This is Research Week Judge, Auburn University

2020 – Research Judge, Center for Neuroscience Initiative, Auburn University

2019 Habilitation à Diriger des Recherches Committee, University of Grenoble Alpes

2017 – 2018 Curriculum Committee, College of Education, Auburn University

2017 Faculty Search Committee, School of Kinesiology, Auburn University

* + - Chair

2016 – 2017 Faculty Search Committee, School of Kinesiology, Auburn University

2014 Graduate Program Task Force, School of Kinesiology, Auburn University

2014 Masters Admissions Task Force, School of Kinesiology, Auburn University

2013 – 2014 Faculty Search Committee, School of Kinesiology, Auburn University

2012 – 2013 Faculty Search Committee, School of Kinesiology, Auburn University

2011 – 2012 Dean’s Student Advisory Committee, School of Public Health, University of Maryland

2009 – 2012 Recruitment Event Committee, Neuroscience and Cognitive Science Program, University of Maryland

2010 – 2011 Faculty Search Committee, Department of Kinesiology, University of Maryland

### Editorial

2019 – Associate Editor, *Research Quarterly for Exercise and Sport*

### Reviews

#### Sponsored Research (Ad-Hoc)

Department of Veterans’ Affairs (U.S.A.); Development and Engineering Center, Army Natick Soldier Research (NSRDEC, U.S.A.); Research Foundation-Flanders (Fonds Wetenschappelijk Onderzoek-Vlaanderen, FWO, Belgium); Royal Society Te Apārangi (New Zealand); Social Sciences and Humanities Research Council (Canada)

#### Journals (Ad-Hoc)

*Advances in Cognitive Psychology*; *American Journal of Psychology*; *Basic and Applied Social Psychology*; *Biological Psychology*; *Cognitive, Affective, and Behavioral Neuroscience*; *Communications in Kinesiology*; *Current Directions in Psychological Science*; *European Journal of Sports Science*; *Experimental Brain Research*; *Frontiers in Human Neuroscience*; *Frontiers in Psychology*; *International Journal of Psychophysiology*; *International Journal of Sport Psychology*; *International Journal of Sports Sciences & Coaching*; *Journal of Applied Social Psychology*; *Journal of Cognitive Enhancement*; *Journal of the International Neuropsychological Society*; *Journal of Motor Learning and Development*; *Learning and Motivation*; Medicine *and Science in Sport and Exercise*; *Meta-Psychology*; *Neuropsychologia; Neuroscience Letters*; *PeerJ*; *PLoS One*; *Psychology of Sport and Exercise*; *Research Quarterly for Exercise and Sport*; *Scientific Reports*; *Sport, Exercise, and Performance Psychology*; *Sports Medicine*

#### Books/Book Chapters (Ad-Hoc)

Motor Behavior (*American College of Sports Medicine’s Introduction to Exercise Science*); Neuroeconomics (*A Research Agenda in Experimental Economics*); *Sport Neuroscience and Psychophysiology*; *Sport Psychology*

## Outreach

2016 – Brain Camp Presenter, Department of Psychological Sciences, Auburn University

2015 – 2018 Sport Science Camp Presenter, School of Kinesiology, Auburn University

2017 Faculty Research Symposium Presentation, Auburn University

2017 Brown Bag Seminar Series Presentation, Department of Psychological Sciences, Auburn University

2014 – 2016 Ad Hoc Consultant, Gymnastics, Auburn University

2014 Life Skills Lecture Series Presentation, Department of Athletics, Tuskegee University

2012 – 2013 Ad Hoc Consultant, Track and Field, Opelika High School

## Awards

2012 James A. Humphrey Award for Most Outstanding Publication by a Graduate Student, Department of Kinesiology, University of Maryland

2012 Graduate Research Interaction Day First-Place Poster, University of Maryland

2012 Induction into Gamma Zeta Chapter of Delta Omega, the Honorary Society of Public Health, University of Maryland

2011 – 2012 Center for Teaching Excellence Graduate Fellowship, University of Maryland

2011 Distinguished Teaching Assistant Award, Department of Kinesiology, University of Maryland

2011 F. Daniel Wagner Most Outstanding Physical Activity Teacher Award, Department of Kinesiology, University

2010 F. Daniel Wagner Most Outstanding Physical Activity Teacher Award, Department of Kinesiology, University

2009 – 2010 First Year Fellowship Award, University of Maryland