

GEORGE A. BUZZELL
Curriculum Vitae

Florida International University, Miami, FL
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Academic Positions

- 2020-present Assistant Professor, Department of Psychology, Florida International University, Miami, FL
- 2016-2020 Postdoctoral Fellow, Department of Human Development and Quantitative Methodology, University of Maryland, College Park, MD
PI: Nathan A. Fox, PhD

Education

- May 2016 *PhD, Psychology: Cognitive and Behavioral Neuroscience*
George Mason University (Advisor: Craig G. McDonald)
Dissertation: "My own worst enemy: monitoring for errors or processing feedback can lead to impaired performance when inter-trial-intervals are short"
- May 2011 *Bachelor of Science in Psychology with Honors*
George Mason University
Thesis: "Electrophysiological indices of conflict in an auditory spatial Stroop task"

Grants

Active

- 2023-2025 R21 MH131928, National Institute of Mental Health (NIMH)
Ecological Assessment of Cognitive Control in Individuals with Social Anxiety
Role: **Co-Principal Investigator (Contact PI)**
- 2022-2027 R01 MH131637, National Institute of Mental Health (NIMH)
A developmentally-sensitive mechanism underlying the escalation of adolescent social anxiety
Role: **Co-Principal Investigator (Contact PI)**
- 2021-2023 *Brain & Behavior Research Foundation*
NARSAD Young Investigator Grant: A neural mechanism underlying the emergence of social anxiety during the adolescent period
Role: **Principal Investigator**
- 2019-2024 R01 MH119299, National Institute of Mental Health (NIMH)
Targeting Attention Orienting to Social Threat to Reduce Social Anxiety in Youth
Role: **Co-Investigator**

Completed

- 2021-2022 U01 DA055316, National Institute of Mental Health (NIMH)

The Healthy Brain and Child Development National Consortium
 Role: **Co-Investigator, Subawardee**

2018-2020 *Bill and Melinda Gates Foundation*
 Optimizing prediction of infant brain health outcomes through advanced EEG
 signal processing and network analysis
 Role: **Principal Investigator**

Journal Publications

- ⁺Hosseini, K., Mattfeld, A. T., Pettit, J. W., & **Buzzell, G. A.** (2025, preprint). Error-Related Memory Biases Are Specific to Social Stimuli for Socially Anxious Individuals. *bioRxiv: The Preprint Server for Biology*, 2025.10.13.682081.
⁺ **Mentored student/trainee**
- ⁺Niu, Y., ⁺Hosseini, K., ⁺Pena, A., ⁺Rodriguez, C., & **Buzzell, G. A.** (2025, preprint). Social observation influences the trajectory of performance monitoring across trials: evidence from single-trial estimates of the ERN and CRN. *bioRxiv: The Preprint Server for Biology*, 2025.09.16.676498.
⁺ **Mentored student/trainee**
- ⁺Sahar, L. A., ⁺Alexander, J. M., & **Buzzell, G. A.** (2025, preprint). Performance deficits in naturalistic reading aloud are associated with social anxiety symptoms. PsyArXiv:
 doi.org/10.31234/osf.io/n8kyt_v1
⁺ **Mentored student/trainee**
- Valadez, E. A., Conte, S., Richards, J. E., Feng, Y., Liuzzi, L., McSweeney, M., Tan, E., **Buzzell, G. A.**, Morales, S., Winkler, A. M., Cardinale, E. M., White, L. K., Pine, D. S., & Fox, N. A. (2025). Integrating Multimodal Neuroimaging of Error Monitoring to Estimate Future Anxiety in Adolescents. *JAMA Network Open*, 8(10), e2539133.
- Morales, S., & **Buzzell, G. A.** (2025). EEG time-frequency dynamics of early cognitive control development. *Developmental Cognitive Neuroscience*, 73, 101548.
- Morales, S., Oh, L., Cox, K., Rodriguez-Sanchez, R., Nadaya, G., **Buzzell, G. A.**, & Troller-Renfree, S. V. (2025). Generalizability of developmental EEG: Demographic reporting, representation, and sample size. *Developmental Cognitive Neuroscience*, 74, 101567.
- Xu, X., **Buzzell, G. A.**, Bowers, M. E., Shuffrey, L. C., Leach, S. C., McSweeney, M., Yoder, L., Fifer, W. P., Myers, M. M., Elliott, A. J., Fox, N. A., & Morales, S. (2025). Electrophysiological correlates of inhibitory control in children: Relations with prenatal maternal risk factors and child psychopathology. *Development and Psychopathology*, 37(2), 976–989.
- Modico, M. A., Cabrera, V. M., Jimenez, S., Rey, Y., **Buzzell, G. A.**, Silverman, W. K., & Pettit, J. W. (2025). Attention Shifting Moderates the Association Between Threat Interpretation Bias and Anxiety in Youth. *Cognitive Therapy and Research*.
- ⁺Stibolt, O. A., Soto, F. A., Pettit, J. W., Rey, Y., & **Buzzell, G. A.** (2025). Exploring the role of post-error processing in social anxiety across age. *Journal of Child Psychology and Psychiatry*, 66(8), 1223–1233.

+ **Mentored student/trainee**

Troller-Renfree, S. V., Morales, S., **Buzzell, G. A.**, & Sandre, A. (2025). Heterogeneity in pediatric resting EEG data processing and analysis: A state of the field. *Psychophysiology*, *62*(2), e14733.

+Alexander, J. M. & **Buzzell, G. A.** (2024). Emotional Context and Predictability in Naturalistic Reading Aloud. *Emotion*, *24*(3), 617-627.

+ **Mentored student/trainee**

+Hosseini, K., Pettit, J. W., Soto, F. A., Mattfeld, A. T., & **Buzzell, G. A.** (2024). Toward a mechanistic understanding of the role of error monitoring and memory in social anxiety. *Cognitive, Affective & Behavioral Neuroscience*, *24*(5), 948–963.

+ **Mentored student/trainee**

+Manning, B. L., +Hosseini, K., Yang, E., **Buzzell, G. A.**, Landi, N., & Kim, S. H. (2024). Neural Processing of Speech Sounds in Autistic Kindergarteners as a Predictor of Reading Outcomes. *Journal of Autism and Developmental Disorders*.

+ **Mentored student/trainee**

+Niu, Y., **Buzzell, G. A.**, Cosmoiu, A., Fox, N. A., Nelson, C. A., Zeanah, C. H., & Humphreys, K. L. (2024). Foster Care Leads to Lower Irritability Among Adolescents with a History of Early Psychosocial Deprivation. *Research on Child and Adolescent Psychopathology*, *52*(8), 1183–1192.

+ **Mentored student/trainee**

Tan, E., Troller-Renfree, S. V., Morales, S., **Buzzell, G. A.**, McSweeney, M., Antúnez, M., & Fox, N. A. (2024). Theta activity and cognitive functioning: Integrating evidence from resting-state and task-related developmental electroencephalography (EEG) research. *Developmental Cognitive Neuroscience*, *67*, 101404.

Shner-Livne, G., **Buzzell, G. A.**, Fox, N. A., & Shechner, T. (2024). Induced error-related theta activity, not error-related negativity, predicts task performance as well as anxiety and worry during real-life stress in a youth sample. *Psychophysiology*, *61*(4), e14492.

Tan, E., Zeytinoglu, S., Morales, S., **Buzzell, G. A.**, Almas, A. N., Degnan, K. A., Chronis-Tuscano, A., Henderson, H., Pine, D. S., & Fox, N. A. (2024). Social versus non-social behavioral inhibition: Differential prediction from early childhood of long-term psychosocial outcomes. *Developmental Science*, *27*(1), e13427.

Conte, S., Richards, J. E., Fox, N. A., Valadez, E. A., McSweeney, M., Tan, E., Pine, D. S., Winkler, A. M., Liuzzi, L., Cardinale, E. M., White, L. K., & **Buzzell, G. A.** (2023). Multimodal study of the neural sources of error monitoring in adolescents and adults. *Psychophysiology*, *60*(10), e14336.

Morales, S., Bowers, M. E., Leach, S. C., **Buzzell, G. A.**, McSweeney, M., Yoder, L., Fifer, W., Elliott, A. J., & Fox, N. A. (2023). Development of auditory change-detection and attentional capture, and their relation to inhibitory control. *Psychophysiology*, *60*(4), e14211.

+Niu, Y., Li, Z., Pettit, J. W., ***Buzzell, G. A.**, & *Zhao, J. (2023). Context and Domain Matter: The Error-Related Negativity in Peer Presence Predicts Fear of Negative Evaluation, not Global

Social Anxiety, in Adolescents. *Psychological Medicine*, 53(14), 6899-6909.

+ **Mentored student/trainee; *Authors contributed equally**

***Buzzell, G. A., *Morales, S., *Valadez, E. A., Hunnius, S., & Fox, N. A. (2023).** Maximizing the potential of EEG as a developmental neuroscience tool. *Developmental Cognitive Neuroscience*, 60, 101201.

***Authors contributed equally**

McSweeney, M., Morales, S., Valadez, E. A., **Buzzell, G. A.**, Yoder, L., Fifer, W. P., Pini, N., Shuffrey, L. C., Elliott, A. J., Isler, J. R., & Fox, N. A. (2023). Age-related trends in aperiodic EEG activity and alpha oscillations during early- to middle-childhood. *NeuroImage*, 269, 119925.

***Buzzell, G. A., *⁺Niu, Y., Aviyente, S., & Bernat, E. (2022).** A practical introduction to EEG Time-Frequency Principal Components Analysis (TF-PCA). *Developmental Cognitive Neuroscience*, 55, 101114.

+ **Mentored student/trainee; *Authors contributed equally**

Wade, M., McLaughlin, K. A., **Buzzell, G. A.**, Fox, N. A., Zeanah, C. H., & Nelson, C. A. (2022). Family-based care buffers the stress sensitizing effect of early deprivation on executive functioning difficulties in adolescence. *Child Development*.

Fox, N. A., Zeytinoglu, S., Valadez, E. A., **Buzzell, G. A.**, Morales, S. and Henderson, H. A. (2022), Annual Research Review: Developmental pathways linking early behavioral inhibition to later anxiety. *Journal of Child Psychology and Psychiatry*.

Valadez, E. A., Morales, S., **Buzzell, G. A.**, Troller-Renfree, S. V., Henderson, H. A., Chronis-Tuscano, A., Pine, D. S., & Fox, N. A. (2022). Development of Proactive Control and Anxiety Among Behaviorally Inhibited Adolescents. *Journal of the American Academy of Child & Adolescent Psychiatry*.

Morales, S., Bowers, M. E., Leach, S. C., **Buzzell, G. A.**, Fifer, W., Elliott, A. J., & Fox, N. A. (2022). Time–frequency dynamics of error monitoring in childhood: An EEG study. *Developmental Psychobiology*, 64(3), e22215.

Buzzell, G. A., Thomas, H. R., Choi, Y. B., & Kim, S. H. (2022). Atypical Medial Frontal Theta Oscillations Underlying Cognitive Control in Kindergarteners with Autism Spectrum Disorder. *Biological Psychiatry: Cognitive Neuroscience and Neuroimaging*, 7(6), 566–575.

Morales, S., Zeytinoglu, S., **Buzzell, G. A.**, Valadez, E. A., Troller-Renfree, S. V., Bowers, M. E., Chronis-Tuscano, A., Degnan, K. A., Almas, A. N., Pine, D. S., & Fox, N. A. (2022). Neurocognitive Profiles in Adolescence Predict Subsequent Anxiety Trajectories During the COVID-19 Pandemic. *Biological Psychiatry: Cognitive Neuroscience and Neuroimaging*, 7(2), 192-200.

McSweeney, M., Morales, S., Valadez, E. A., **Buzzell, G. A.**, & Fox, N. A. (2021). Longitudinal age and sex-related change in background aperiodic activity during early adolescence. *Developmental Cognitive Neuroscience*, 52, 101035.

- Morales, S., Tang, A., Bowers, M.E., Miller, N. V., **Buzzell, G.A.**, Smith, E., Seddio, K., Henderson, H. A., & Fox, N. A. (2021). Infant Temperament Prospectively Predicts General Psychopathology in Childhood. *Development and Psychopathology*.
- Buzzell, G. A.**, Morales, S., Bowers, M. E., Troller-Renfree, S. V., Chronis-Tuscano, A., Pine, D. S., Henderson, H. A., & Fox, N. A. (2021). Inhibitory control and set shifting describe different pathways from behavioral inhibition to socially anxious behavior. *Developmental Science*, *24*(1), e13040.
- Fox, N. A., **Buzzell, G. A.**, Morales, S., Valadez, E. A., Wilson, M., & Henderson, H. A. (2021). Understanding the Emergence of Social Anxiety in Children with Behavioral Inhibition. *Biological Psychiatry*, *89*(7), 681–689.
- Barker, T. V., **Buzzell, G. A.**, Troller-Renfree, S. V., Bowman, L. C., Pine, D. S., & Fox, N. A. (2021). The influence of social motivation on neural correlates of cognitive control in girls. *Developmental Psychobiology*, *63*(5), 1611–1625.
- Beatty, P. J., **Buzzell, G. A.**, Roberts, D. M., Voloshyna, Y., & McDonald, C. G. (2021). Subthreshold error corrections predict adaptive post-error compensations. *Psychophysiology*, *58*(6), e13803.
- Bowers, M. E., Morales, S., **Buzzell, G. A.**, & Fox, N. A. (2021). The influence of monetary reward on proactive and reactive control in adolescent males. *Developmental Cognitive Neuroscience*, *48*, 100934.
- Valadez, E. A., Troller-Renfree, S. V., **Buzzell, G. A.**, Henderson, H. A., Chronis-Tuscano, A., Pine, D. S., & Fox, N. A. (2021). Behavioral inhibition and dual mechanisms of anxiety risk: Disentangling neural correlates of proactive and reactive control. *JCPP Advances*, *1*(2), e12022.
- Beatty, P. J., **Buzzell, G. A.**, Roberts, D. M., & McDonald, C. G. (2020). Contrasting time and frequency domains: ERN and induced theta oscillations differentially predict post-error behavior. *Cognitive, Affective, & Behavioral Neuroscience*, *20*(3), 636–647.
- Troller-Renfree, S. V., **Buzzell, G. A.**, & Fox, N. A. (2020). Changes in working memory influence the transition from reactive to proactive cognitive control during childhood. *Developmental Science*, *23*(6), e12959.
- Leach, S. C., Morales, S., Bowers, M. E., **Buzzell, G. A.**, Debnath, R., Beall, D., & Fox, N. A. (2020). Adjusting ADJUST: Optimizing the ADJUST algorithm for pediatric data using geodesic nets. *Psychophysiology*, *57*(8), e13566.
- Buzzell, G. A.**, Troller-Renfree, S. V., Wade, M., Debnath, R., Morales, S., Bowers, M. E., Zeanah, C. H., Nelson, C. A., & Fox, N. A. (2020). Adolescent cognitive control and mediofrontal theta oscillations are disrupted by neglect: Associations with transdiagnostic risk for psychopathology in a randomized controlled trial. *Developmental Cognitive Neuroscience*, *43*, 100777.
- Debnath, R., **Buzzell, G. A.**, Morales, S., Bowers, M. E., Leach, S. C., & Fox, N. A. (2020). The Maryland analysis of developmental EEG (MADE) pipeline. *Psychophysiology*, *57*(6), e13580.
- Bowers, M. E., **Buzzell, G. A.**, Salo, V., Troller-Renfree, S. V., Hodgkinson, C. A., Goldman, D., Gorodetsky, E., McDermott, J. M., Henderson, H. A., Fox, N. A. (2020). Relations between

catechol-O-methyltransferase Val158Met genotype and inhibitory control development in childhood. *Developmental Psychobiology*, 62(2), 181-190.

- Kim, S. H., **Buzzell, G. A.**, Faja, S., Choi, Y. B., Thomas, H., Brito, N. H., Shuffrey, L. C., Fifer, W. P., Morrison, F. D., Lord, C., & Fox, N. (2020). Neural dynamics of executive function in cognitively-able kindergarteners with autism spectrum disorders (ASD) as predictors of concurrent academic achievement. *Autism*, 24(3), 780-794.
- Smith, A. R., White, L. K., Leibenluft, E., McGlade, A., Heckelman, A. C., Haller, S. P., **Buzzell, G. A.**, Fox, N. A., Pine, D. S. (2020). The Heterogeneity of Anxious Phenotypes: Neural Responses to Errors in Treatment-Seeking Anxious and Behaviorally-Inhibited Youth. *Journal of the American Academy of Child and Adolescent Psychiatry*, 59(6), 759-769.
- Filippi, C. A., Subar, A. R., Sachs, J. F., Kircanski, K., Winkler, A., **Buzzell, G. A.**, Pagliaccio, D., Abend, R., Fox, N. A., Leibenluft, E., Pine, D. S. (2020). Developmental pathways to social anxiety and irritability: The role of the ERN. *Development and Psychopathology*, 32(3), 897-907.
- Bowers, M. E., Reider, L. B., Morales, S., **Buzzell, G. A.**, Miller, N., Troller-Renfree, S. V., Pine, D. S., Henderson, H. A., & Fox, N. A. (2020). Differences in Parent and Child Report on the Screen for Child Anxiety-Related Emotional Disorders (SCARED): Implications for Investigations of Social Anxiety in Adolescents. *Journal of Abnormal Child Psychology*, 48(4), 561–571.
- Troller-Renfree, S. V., **Buzzell, G. A.**, Pine, D. S., Henderson, H. A., Fox, N. A. (2019). Consequences of not planning ahead: reduced proactive control moderates longitudinal relations between behavioral inhibition and anxiety. *Journal of the American Academy of Child & Adolescent Psychiatry*, 58(8), 768-775.
- Buzzell, G. A.**, Barker, T. V., Troller-Renfree, S. V., Bernat, E. M., Bowers, M. E., Morales, S., ... Fox, N. A. (2019). Adolescent cognitive control, theta oscillations, and social motivation. *NeuroImage*, 198, 13-30.
- Troller-Renfree, S. V., **Buzzell, G. A.**, Bowers, M. E., Salo, V., Forman-Alberti, A., Smith, E., Papp, L. J., McDermott, J. M., Pine, D. S., Henderson, H. A., Fox, N. A. (2019). Development of inhibitory control during childhood and its relations to early temperament and later social anxiety: unique insights provided by latent growth modeling and signal detection theory. *Journal of Child Psychology and Psychiatry*, 60(6), 622-629.
- Harrewijn, A., **Buzzell, G. A.**, Debnath, R., Leibenluft, E., Pine, D. S., Fox, N. A. (2019). Frontal alpha asymmetry moderates the relations between behavioral inhibition and social-effect ERN. *Biological Psychology*, 141, 10-16.
- Debnath, R., Salo, V. C., **Buzzell, G. A.**, Yoo, K. H., Fox, N. A. (2019). Mu rhythm desynchronization is specific to action execution and observation: evidence from time-frequency and connectivity analysis. *NeuroImage*, 184, 496–507.
- Barker, T. V., **Buzzell, G. A.**, Fox, N. A. (2019). Approach, avoidance, and the detection of conflict in the development of behavioral inhibition. *New Ideas in Psychology*, 53, 2-12.

- Smith, A., Kircanski, K., Brotman, M.A., Do, Q.B., Subar, A.R., Silk, J.S., Engel, S., Crosby, R.D., Harrewijn, A., White, L.K., Hasser, S.P., Cardinale, E.M., **Buzzell, G. A.**, Barker, T. V., Leibenluft, E., Pine, D.S. (2019). Advancing clinical neuroscience through enhanced tools: Pediatric social anxiety as an example. *Depression and Anxiety*, 36(8), 701-711.
- Beatty, P. J., **Buzzell, G. A.**, Roberts, D. M., McDonald, C. G. (2018). Speeded response errors and the error-related negativity modulate early sensory processing. *NeuroImage*, 183, 112–120.
- *Wiese, E., ***Buzzell, G. A.**, Abubshait, A., Beatty, P. J. (2018). Seeing minds in others: Mind perception modulates low-level social-cognitive performance and relates to ventromedial prefrontal structures. *Cognitive, Affective, & Behavioral Neuroscience*, 18(5), 837–856.
***Authors contributed equally**
- Keren, H., O’Callaghan, G., Vidal-Ribas, P., **Buzzell, G. A.**, Brotman, M. A., Leibenluft, E., ... Stringaris, A. (2018). Reward Processing in Depression: A Conceptual and Meta-Analytic Review Across fMRI and EEG Studies. *American Journal of Psychiatry*, 175(11), 1111-1120.
- Bowers, M. E., **Buzzell, G. A.**, Bernat, E. M., Fox, N. A., Barker, T. V. (2018). Time-frequency approaches to investigating changes in feedback processing during childhood and adolescence. *Psychophysiology*, 55(10), e13208.
- Buzzell, G. A.**, Troller-Renfree, S. V., Barker, T. V., Bowman, L. C., Chronis-Tuscano, A., Henderson, H. A., Kagan, J., Pine, D. S., & Fox, N. A. (2017). A Neurobehavioral Mechanism Linking Behaviorally Inhibited Temperament and Later Adolescent Social Anxiety. *Journal of the American Academy of Child & Adolescent Psychiatry*, 56(12), 1097–1105.
- Buzzell, G. A.**, Richards, J. E., White, L. K., Barker, T. V., Pine, D. S., Fox, N. A. (2017). Development of the error monitoring system from ages 9-35: unique insight provided by MRI-constrained source localization of EEG. *NeuroImage* 157, 13-26.
- Buzzell, G. A.**, Beatty, P. J., Paquette N. A., Roberts D. M., McDonald C. G. (2017). Error-Induced Blindness: Error Detection Leads to Impaired Sensory Processing and Lower Accuracy at Short Response–Stimulus Intervals. *The Journal of Neuroscience* 37(11), 2895 – 2903.
- Azarian, B., **Buzzell, G. A.**, Esser, E. G., Dornstaeder, A. J., Peterson M. S. (2017). Averted body postures facilitate orienting of the eyes. *Acta Psychologica* 175, 28-32.
- Buzzell, G. A.**, Roberts, D. M., Fedota, J. R., Thompson, J. C., Parasuraman, R., McDonald, C. G (2016). Uncertainty-dependent activity within the ventral striatum predicts task-related changes in response strategy. *Cognitive, Affective & Behavioral Neuroscience* 16(2), 219-233.
- Buzzell, G. A.**, Das, B., Cruz-Cano, R., Nkongho, L. E., Kidanu, A. W., Kim, H., Clark, P. I, McDonald, C. G. (2016). Using Electrophysiological Measures to Assess the Consumer Acceptability of Smokeless Tobacco Products. *Nicotine and Tobacco Research* 18, 1853-1860.
- Buzzell, G. A.**, Fedota, J. R., Roberts, D. M., McDonald, C. G (2014). The N2 ERP component as an index of impaired cognitive control in smokers. *Neuroscience Letters* 563, 61-65.
- Roberts, D. M., Fedota, J. R., **Buzzell, G. A.**, Parasuraman, R., McDonald, C. G. (2014). Prestimulus Oscillations in the Alpha Band of the EEG Are Modulated by the Difficulty of Feature

Discrimination and Predict Activation of a Sensory Discrimination Process. *Journal of Cognitive Neuroscience* 26(8), 1615-1628.

Buzzell, G. A., Roberts, D. M., Baldwin, C., McDonald, C. G. (2013). An electrophysiological correlate of conflict processing in an auditory spatial Stroop task: The effect of individual differences in navigational style. *International Journal of Psychophysiology*, 90(2), 265-271.

Buzzell, G., Chubb, L., Safford, A. S., Thompson, J. C., McDonald, C. G. (2013). Speed of Human Biological Form and Motion Processing. *PLoS ONE*, 8(7), e69396.

Book Chapters

Buzzell, G. A., Lahat, A., Fox, N. A. (2020). The neural correlates of cognitive control and the development of social behavior. In J. Rubenstein and P. Rakic (Eds.), *Comprehensive Developmental Neuroscience: Neural Circuit and Cognitive Development (Second Edition, Vol 2)*. Amsterdam, Netherlands: Elsevier.

Buzzell, G. A., Troller-Renfree, S. V., Morales, S., Fox, N. A. (2018). Relations between behavioral inhibition, cognitive control, and anxiety: novel insights provided by parsing subdomains of cognitive control. In K. Pérez-Edgar & N. A. Fox (Eds.), *Behavioral Inhibition: Integrating Theory, Research, and Clinical Perspectives* (pp. 213–235). Cham: Springer International Publishing.

Baldwin, C., Coyne, J. T., Roberts, D. M., Barrow, J. H., Cole, A., Sibley, C., Taylor, B., **Buzzell, G. A.** (2010). Prestimulus Alpha as a precursor to errors in a UAV target orientation detection task. In *Applied Human Factors and Ergonomics.*, G. Salvendy and W. Karwowski, (Eds.). Oxford, UK: Taylor & Francis.

Oral Presentations and Symposia (Conferences)

⁺Stibolt, O. A., Soto, F. A., Pettit, J. W., **Buzzell, G. A.** (2023, May 22-23). *Fundamental Changes in the Link between Social Anxiety and Post-Error Processing across Development*. [Conference presentation]. Association for Cognitive Bias Modification, Bethesda, MD

⁺**Mentored student/trainee**

⁺Hosseini, L., Pettit, J. W., Soto, F. A., Mattfeld, A. T., **Buzzell, G. A.** (2023, May 22-23). *A novel paradigm to investigate the impact of error monitoring on incidental encoding of social stimuli*. [Conference presentation]. Association for Cognitive Bias Modification, Bethesda, MD

⁺**Mentored student/trainee**

Boutris, P., **Buzzell, G.A.**, Rey, Y., Silverman, W.K., & Pettit, J.W. (2022, February 13-15). *Drift-diffusion modelling identifies unique subgroups of youth that differentially respond to ABMT for social anxiety*. [Paper presentation]. Inaugural Conference of the Association for Cognitive Bias Modification (ACBM), Tel Aviv, Israel. Virtual conference.

Filippi, C., Morales, S., **Buzzell, G. A.**, Bracy, M., Leach, S. C., Pine, D. S. & Fox, N. A. (2021, April 28-May1). *Functional connectivity relates to electrophysiological markers of attention in infancy*. [Conference presentation]. 76th Annual Meeting Society of Biological Psychiatry. Virtual conference.

- Fox, N. A., Filippi, C., Morales, S., **Buzzell, G. A.**, Bracy, M., Leach, S. C., & Pine, D. S. (2020, September 9-12). *Saliency network functional connectivity relates to electrophysiological markers of attention in infancy*. [Conference presentation]. 8th Annual Flux Congress. Virtual conference.
- Morales, S., Bowers, M. E., Leach, S. C., **Buzzell, G. A.**, Debnath, R., Friedrich, C., Andrew R., Thomes, T., Fifer, W. P., Elliott, A., & Fox, N. A. (2020) *Lessons learned from measuring children's neurodevelopment in a large and representative sample*. [Conference presentation]. International Society of Psychoneuroendocrinology. Virtual conference.
- Thomas, H. R., **Buzzell, G.A.**, Choi, Y.B., Klein, C.B., Fox, N., & Kim, S.H. (2020, May 6-9). *Neural and behavioral impairments in cognitive control in kindergarteners with ASD: EEG analyses of theta oscillations*. [Conference presentation]. International Society of Autism Research (INSAR) Annual Meeting. Virtual conference.
- Buzzell, G. A.**, Solway, A., Bernat, E. M., Morales, S., Barker, T. V., Troller-Renfree, S. V., Henderson, H. A., Pine, D. S., Fox, N. A. (2019, September 25-29). *Clarifying the link between performance monitoring and control in adolescents with a history of behavioral inhibition*. [Conference presentation]. Society for Psychophysiological Research, Washington, D.C.
- Buzzell, G. A.**, Troller-Renfree, S. V., Mark Wade, Debnath, R., Morales, S., Zeanah, C. H., Nelson, C. A., Fox, N. A. (2019, October 16-18). *Investigating how the timing of removal from institutional care and placement with foster-care families influences brain oscillation patterns*. [Conference presentation]. International Society for Developmental Psychobiology, Chicago, Illinois.
- Buzzell, G. A.**, Barker, T. V., Troller-Renfree, S. V., Bernat, E. M., Bowers M., Morales, S., Bowman, L., Henderson, H. A., Pine, D. S., Fox, N. A. (2019, March 21-23). *Leveraging time-frequency EEG to understand the role of theta oscillations in adolescent cognitive control*. [Conference presentation]. Society for Research on Child Development, Baltimore, Maryland.
- Buzzell, G. A.**, Troller-Renfree, S. V., Debnath, R., Tang, A., Zeanah, C. H., Nelson, C. A., Fox, N. A. (2019, March 21-23). *RCT of foster care leads to improvements in control-related theta oscillations over one decade later*. [Conference presentation]. Society for Research on Child Development, Baltimore, Maryland.
- Debnath, R., Salo, V., **Buzzell, G. A.**, Yoo, K., Fox, N. A. (2019, March 21-23). *Mirroring activity during observation of actions underlies distinct yet functionally connected motor and attention processes*. [Conference presentation]. Society for Research on Child Development, Baltimore, Maryland.
- Buzzell, G. A.**, Barker, T. V., Troller-Renfree, S. V., Bowers., M. E., Morales, S., Bowman, L. C., Beatty, P. Roberts, D., McDonald, C. G., Bernat, E., Henderson, H., Pine, D. S, Fox, N. A (2018, October 3-7). *Complex relations between error monitoring and subsequent control in adolescence*. [Conference presentation]. Society for Psychophysiological Research, Quebec City, Quebec, Canada.
- Buzzell, G. A.**, Troller-Renfree, S. V., Henderson, H. A., Pine, D. S., Fox, N. A. (2017, October 11-15). *Heightened error monitoring within a social context mediates longitudinal relations between behavioral inhibition and adolescent social anxiety*. [Conference presentation]. Society for Psychophysiological Research, Vienna, Austria.

Buzzell, G. A., Barker, T. V., Troller-Renfree, S. V., Henderson, H. A., Pine, D. S., Fox, N. A. (2017, April 6-8). *A neurobehavioral mechanism linking temperament and social anxiety*. [Conference presentation]. Society for Research on Child Development, Austin, Texas.

Troller-Renfree, S. V., Stevens, B., **Buzzell, G. A.**, Degnan, K., Henderson, H. A., Fox, N. A. (2017, April 6-8). *The moderating role of cognitive control on the link between behavioral inhibition and the development of anxiety*. [Conference presentation]. Society for Research on Child Development, Austin, Texas.

Buzzell, G. A., Roberts, D., Taylor, B., Barrow, J., Baldwin, C. L. (2010). *Neurophysiological measures of mental workload in a visual search task*. [Conference presentation]. Virginia Social Science Association, Petersburg, Virginia.

Invited Talks

Time-Frequency Analyses: Time-Frequency PCA. *Fetal, Infant, & Toddler Neuroimaging Group: Virtual Interactive Workshop*, 2023.

You made a mistake... but now what? Links between error monitoring, post-error processing, and pediatric social anxiety. *Data Club*, Catholic University of Eichstätt-Ingolstadt, Bavaria, Germany, 2021.

The neurocognitive development of cognitive control. *Cognitive and Neural Systems Seminar*, University of Maryland, College Park, MD, 2019.

Leveraging source localization of EEG to study cognitive control. *Steinhauser Lab*, Catholic University of Eichstätt-Ingolstadt, Bavaria, Germany, 2019.

Cognitive control in youth and adults: links to pediatric anxiety. *Affective Neuroscience Lecture Series (ANGST)*, NIH, Bethesda, MD, 2018.

Mind your mistakes: the neural basis of error monitoring across development and relations to psychopathology. *ADP Colloquia Series*, George Mason University, Fairfax, VA, 2018.

Refereed Conference Proceedings

Martini, M. C., **Buzzell, G. A.**, Wiese, E. (2015). Agent appearance modulates mind attribution and social attention in human-robot interaction. In *Social Robotics*.

Barrow, J. H., Baldwin, C. L., Roberts, D., Taylor, B., Sibley, C., Coyne, J. T., Mandulak, A., **Buzzell, G. A.**, Penaranda, N. (2011). Using physiological measures to improve training for UAV operators. In *Proceedings of the 16th International Symposium on Aviation Psychology*.

Roberts, D., Taylor, B., Barrow, J., Robertson, G., **Buzzell, G. A.**, Sibley, C., Cole, A., Coyne, J., Baldwin, B. (2010). EEG spectral analysis of workload for a part-task UAV simulation. In *Proceedings of the Annual Meeting of the Human Factors & Ergonomics Society*.

Poster Presentations (Conferences)

- ⁺Alexander, J. M., ⁺Lopez-Nuñez, A., ⁺Rodriguez, B. M., ⁺Duncombe, A. N., ⁺Malykke, S. B., **Buzzell, G. A.** (2022, October 6-8). Effects of lexical valence and emotional (in)congruency in naturalistic reading aloud. *14th Annual Meeting of the Society for the Neurobiology of Language*, Philadelphia, PA, USA.
+Mentored student/trainee
- Pournaghдали, A., McDonald, C., Soto, F., **Buzzell, G. A.** (2022). Changes in bias and not sensitivity underlie increases in the accuracy of perceptual decisions after errors and uncertainty. *Vision Sciences Society*, St. Pete Beach, FL.
- ⁺Camacho, B., ⁺Farias, K., ⁺Ma, C., **Buzzell, G. A.** (2021). Leveraging machine learning approaches to classify encoded stimulus identity. *Cognitive Neuroscience Society*, Virtual Conference.
+Mentored student/trainee
- ⁺Polyanskaya, A., Boutris, P., Rey, Y., Pettit, J. W., **Buzzell, G. A.** (2021). Towards and improved understanding of the role of cognitive control in pediatric anxiety. *Cognitive Neuroscience Society*, Virtual Conference.
+Mentored student/trainee
- Valadez, E., **Buzzell, G. A.**, Troller-Renfree, S. V., Henderson, H. A. Chronis-Tuscano, A., Pine, D. S., Fox, A. F. (2020). Using time-frequency EEG power to disentangle dual mechanisms of control and anxiety risk. *Society for Psychophysiological Research*, Virtual Conference.
- Buzzell, G. A.**, Troller-Renfree, S. V., Barker, T. V., Bowman, L. C., Morales, S., Bernat, E. M., Henderson, H. A., Pine, D. S., Fox, N. A. (2019). Relations between social anxiety and cognitive control dynamics while under social observation. *7th International Symposium on Motivational and Cognitive control*, Berlin, Germany.
- Morales, S., Bowers, M., Leach, S. C., **Buzzell, G. A.**, Elliot, A., Fifer, W., & Fox, N. A. (2019). Electrophysiological correlates of inhibitory control in young children. *International Society for Developmental Psychobiology*, Chicago, IL.
- Leach, S. C., Morales, S., Bowers, M. E., **Buzzell, G. A.**, Debnath, R., Beall, D., Elliott, A., Fifer, W., Fox N. A. (2019). Adjusting ADJUST: optimizing the ADJUST algorithm for pediatric data using geodesic nets. *Society for Psychophysiological Research*, Washington, D.C.
- Morales, S., Suarez, G. L., **Buzzell, G. A.**, Debnath, R., Redcay, E., Fox N. A. (2019). Involvement of the mirror neuron system in automatic imitation in childhood. *Society for Psychophysiological Research*, Washington, D.C.
- Beatty, P., **Buzzell, G. A.**, Roberts, D., McDonald, C. G. (2019). Contrasting time and frequency domains: transient frontal midline theta predicts adaptive post-error compensations. *Society for Psychophysiological Research*, Washington, D.C.
- Bowers, M., **Buzzell, G. A.**, Morales, S., Troller-Renfree, S. V., Bernat, E., Pine, D., Fox, N. A. (2019). Time-frequency approach to studying cognitive control in children: the role of theta and delta oscillations. *Society for Research on Child Development*, Baltimore, MD.
- Bowers, M., Reider, L., Morales, S., **Buzzell, G. A.**, Miller, N., Troller-Renfree, S. V., Pine, D. S., Henderson, H. A., Fox, N. A. (2019). Differences in parent and child report of the SCARED:

implications for investigations of social anxiety. *Society for Research on Child Development*, Baltimore, MD.

- Morales, S., **Buzzell, G. A.**, Harrewijn, A., Marshall, P. J., Reeb-Sutherland, B. C., Pine, D. S., Henderson, H. A., Fox, N. A. (2018). Infant electrophysiological responses to auditory novelty longitudinally predict externalizing and attention problems across childhood. *Society for Psychophysiological Research*, Quebec City, Quebec, Canada.
- Bowers, M. E., **Buzzell, G. A.**, Barker, T. V., Troller-Renfree, S. V., Bernat, E. M., Morales, S., Pine, D. S., Henderson, H. A., Fox, N. A. (2018). Associations between rule-breaking behaviors and electrophysiological measures of cognitive control in adolescence. *Society for Psychophysiological Research*, Quebec City, Quebec, Canada.
- Beatty, P., **Buzzell, G. A.**, Roberts, D., McDonald, C. G. (2018). Speeded response errors and the error-related negativity modulate early sensory processing. *Society for Psychophysiological Research*, Quebec City, Quebec, Canada.
- Buzzell, G. A.**, Debnath, R., Troller-Renfree, S. V., Tang, A., Zeanah, C. H., Nelson, C. A., Fox, N. A. (2018). Long-lasting improvements in cognitive control: behavioral and neural outcomes of a randomized control trial of a foster care intervention over one decade later. *Flux Satellite Meeting*, Chapel Hill, NC.
- Buzzell, G. A.**, Troller-Renfree, S. V., Barker, T. V., Bowers, M., Bowman, L., Bernat, E., ... Fox, N. A. (2018). Complex dynamics of the error-monitoring system reveal insights into social anxiety within structured and unstructured social settings. *Biological Psychiatry*, 83(9), S243.
- Debnath, R., Tang, A., **Buzzell, G. A.**, Fox, N. A., Zeanah, C. H., Nelson, C. A. (2018). Institutional care is associated with changes in brain electrical activity: results from a longitudinal, randomized control trial of children in Romania. *Biological Psychiatry*, 83(9), S364–S365.
- Harrewijn, A., **Buzzell, G. A.**, Debnath, R., Pine, D. S., Fox, N. A. (2018). Influence of behavioral inhibition and EEG resting state on social anxiety symptoms. *Biological Psychiatry*, 83(9), S349–S350.
- Bowers, M. E., **Buzzell, G. A.**, Salo, V., Troller-Renfree, S. V., Hodgkinson, C. A., Goldman, D., Gorodetsky, E., McDermott, J. M., Henderson, H. A., Fox, N. A. (2018). Relations between catechol-O-methyltransferase (COMT) genotype and inhibitory control development in childhood. *Cognitive Neuroscience Society*, Boston, MA.
- Buzzell, G. A.**, Forman-Alberti, A., Troller-Renfree, S. V., Barker, T. V., Bowman, L. C., Pine, D. S., Henderson, H. A., Fox, N. A. (2017). The error-related negativity mediates longitudinal relations between behavioral inhibition and observed social anxiety. *International Society for Developmental Psychobiology*, Washington, D.C.
- Bowers, M. E., **Buzzell, G. A.**, Barker, T. V., Bernat, E. M., Fox, N. A. (2017). The development of feedback processing in adolescence: an electrophysiological study. *International Society for Developmental Psychobiology*, Washington, D.C.

- Buzzell, G. A.**, Richards, J. E., White, L. K., Barker, T. V., Pine, D. S., Fox, N. A. (2017). Development of the error monitoring system from ages 9-35: unique insight provided by MRI-constrained source localization of EEG. *Cognitive Neuroscience Society*, San Diego, CA.
- Beatty, P. J., **Buzzell, G. A.**, Paquette N. A., Roberts D. M., McDonald C. G. (2017). Error-induced blindness: error detection leads to impaired sensory processing and lower accuracy at short response-stimulus intervals. *Cognitive Neuroscience Society*, San Diego, CA.
- Abubshait, A., Wiese, E., **Buzzell, G. A.**, Beatty, P. J. (2017). Seeing minds in others: activation of left temporoparietal junction during mentalizing is directly related to performance in social interactions. *Cognitive Neuroscience Society*, New York, NY.
- Abubshait, A., **Buzzell, G. A.**, Beatty, P. J., Wiese, E. (2016). Mentalizing and the uncanny valley: mentalizing network activity predicts social behavior. *Cognitive Neuroscience Society*, New York, NY.
- Beatty, P. J., **Buzzell, G. A.**, Paquette, N., Roberts, D. M., McDonald, C. G. (2016). P3b and Pe as Neural Indices of Confidence. *Cognitive Neuroscience Society*, New York, NY.
- Buzzell, G. A.**, Roberts, D. M., Cummings, L. R., Fedota, J. R., Thompson, J. C., Parasuraman, R., McDonald, C. G. (2015). Uncertainty monitoring as a mechanism for flexible cognitive control: new insights from individual differences. *Cognitive Neuroscience Society*, San Francisco, CA.
- Roberts, D. M., **Buzzell, G. A.**, Parasuraman, R., McDonald, C. G. (2015). Comparing the predicted activations of an ACT-R cognitive model with human fMRI BOLD response in a difficult visual discrimination task. *Cognitive Neuroscience Society*, San Francisco, CA.
- Jesso, M., Roberts, D. M., **Buzzell, G. A.**, McDonald, C. G., Baldwin, C. L. (2015). Electrophysiological evidence for facilitation of auditory change detection with spatialized audio. *Cognitive Neuroscience Society*, San Francisco, CA.
- Buzzell, G. A.**, Nkongho, L. E., McDonald, C. G., Kidanu, A. W., Kim, H., Brinkman, M. C., Gordon, S. M., Clark, P. I. (2015). Acute neurocognitive alterations produced by smokeless tobacco products. *Society for Research on Nicotine and Tobacco*, Philadelphia, PA.
- Beatty, P. J., **Buzzell, G. A.**, Roberts, D. M., McDonald, C. G. (2014). The correct-response negativity as an index of perceptual uncertainty. *Cognitive Neuroscience Society*, San Francisco, CA.
- Buzzell, G. A.**, Fedota, J. R., Daniel, R. M., Shaw, E. P., McDonald, C. G. (2014). Sensory evidence is predictive of certainty in perceptual decisions. *Society for Neuroscience*, Washington D.C.
- Buzzell, G. A.**, Fedota, J. R., Braymiller, J., Thompson, J. C., Parasuraman, R., McDonald, C. G. (2014). Ventral striatal and dorsal anterior cingulate activation reflect subjective certainty in a difficult visual discrimination task. *Cognitive Neuroscience Society*, Boston, MA.
- Shaw, E. P., **Buzzell, G. A.**, McDonald, C. G. (2014). Motivational significance does not selectively modulate early visual discrimination processes in a difficult discrimination task. *Cognitive Neuroscience Society*, Boston, MA.

- Baldwin, C. L., Roberts D. M., **Buzzell, G. A.**, Sin. B. S., Jesso, M., Simpson, B. D., Iyer, N. (2014). Individual differences in change deafness: Verbal cognitive style aids detection. *Cognitive Neuroscience Society*, Boston, MA.
- Buzzell, G. A.**, Nkongho, L. E., Sharma, E., Kidanu, A. W., McDonald, C. G., Clark, P. I. (2014). The influence of electronic nicotine delivery systems on electrophysiological correlates of attention. *Society for Research on Nicotine and Tobacco*, Seattle, WA.
- Buzzell, G. A.**, Fedota, J. R., Daniel, R. M., Shaw, E. P., McDonald, C. G. (2013). Certainly you're wrong: A dissociation between neural correlates of stimulus discrimination and confidence in perceptual decisions. *Society for Neuroscience*, San Diego, CA.
- Buzzell, G. A.**, Roberts, D., Fedota, J., McDonald, C. G. (2013). N2 as an index of impaired inhibitory control in smokers. *Cognitive Neuroscience Society*, San Francisco, CA.
- Roberts, D., Fedota, J., **Buzzell, G. A.**, Parasuraman, R., McDonald, C. (2013). Top-down control selectively suppresses pre-stimulus alpha power in a contextual discrimination task. *Cognitive Neuroscience Society*, San Francisco, CA.
- Clark, P. I., McDonald, C. G, Coleman, B. N., Sharma, E., **Buzzell, G. A.** (2013). Electrophysiological assessment of consumer acceptability of electronic nicotine delivery systems. *Society for Research on Nicotine and Tobacco*, Boston, MA.
- Buzzell, G. A.**, Chubb, L., Safford, A. S., Thompson, J. C., McDonald, C. G. (2012). Speed of human biological form and motion processing. *Society for Neuroscience*, New Orleans, LA.
- Buzzell, G. A.**, Baldwin, C., Roberts, D., Barrow, J., McDonald, C. (2012). Navigational style and electrophysiological correlates of conflict in an auditory spatial Stroop task. *Cognitive Neuroscience Society*, Chicago, IL.
- Buzzell, G. A.**, Baldwin, C. L., Wenger, L., Roberts, D., Barrow, J., McDonald, C. G. (2011). Electrophysiological indices of conflict in an auditory spatial Stroop task. *Society for Neuroscience*. Washington D. C.
- Buzzell, G. A.** (2011). Electrophysiological indices of conflict in an auditory spatial Stroop task. *College of Humanities and Social Sciences Colloquium*, Fairfax, VA.
- Roberts, D., Block, C. K., Barrow, J., Taylor, B., **Buzzell, G. A.**, Baldwin, C. L. (2010). Effect of stimulus quality on language processing in younger and older adults. *Cognitive Neuroscience Society*, Montreal, Canada.

Awards and Scholarships

- FIU College of Arts, Sciences & Education (CASE) Faculty Award for Research (2022)
-Recognition of faculty who have distinguished themselves in research
- International Society for Developmental Psychobiology Travel Award (2019, 2017)
-Competitive travel grant, \$500

Outstanding TA Award (2016)

-Competitive award granted to one TA in the GMU Psychology Department, \$100

Undergraduate Apprenticeship Program Writing Fellowship (2011)

-Fellowship awarded for the advancement of undergraduate research or scientific writing, \$1000

GMU Psychology Department Mellinger Award (2011)

-For excellence in the areas of scholarship, academics, and service, \$100

Advanced Scholar Award (2011)

-For the highest GPA in the GMU Psychology department's graduating class, \$100

Award for Best Project Involving Information technology (2011)

-Awarded for a poster presentation at the GMU CHSS Colloquium, \$200

Dean's Challenge Scholarship (2010)

- Awarded for scholarship, academic achievements, and extracurricular activities, \$2000

Teaching

2020-2022 Introduction to Biological Psychology (FIU)

2016, 2012-2013 Biological Psychology (GMU)

2013-2016 Co-instructor for the Psychology Honors Program (GMU)

Teaching Assistantships

2011-2012 Sensation and Perception (GMU)

2011 Biological Psychology (GMU)

2011 Psychology of Communication (GMU)

Consulting Work (paid)

2-day workshop covering EEG analysis and theory

-New York University (2019)

-Weill Cornell Medicine (2018)

Preconference workshop on EEG analysis at the Society for Psychophysiological Research (2019)

Mentorship Experience

Graduate and undergraduate students of the NDC Laboratory (FIU; 2020-present)

Graduate and undergraduate students in the lab of Dr. Nathan A. Fox (UMD; 2016-2020)

Graduate and undergraduate students in the lab of Dr. Craig G. McDonald (GMU; 2012-2016)

Academic Service

Ad-hoc reviewer: *Psychological Science, The Journal of Neuroscience, Cerebral Cortex, eLife, Child Development, NeuroImage, Developmental Cognitive Neuroscience, Psychophysiology, Developmental Science, Biological Psychiatry, Biological Psychology, Neuropsychologia, Cognitive Affective and Behavioral Neuroscience, Developmental Psychobiology, Int. Journal of Psychophysiology, BMC Medicine, Cognition & Emotion, Development and Psychopathology*

Guest Editor, *Developmental Cognitive Neuroscience* (2021-2023)

FIU Dean's Distinguished Doctoral Fellowship Review Committee (2022-present)

FIU Psychology Department Colloquium Committee (2022-present)

FIU Undergraduate Curriculum Committee (2021-2022)

Co-organizer and host, GMU Students in Neuroscience Symposium (2014-2015)

President, GMU Students in Neuroscience student group (2014-2015)

Vice-President, GMU Students in Neuroscience student group (2013-2014)

Student liaison for the GMU Cognitive and Behavioral Neuroscience (CBN) program (2012-2016)

GMU Student Advising Counselor (2012)