Douglas H. Schultz

Research Assistant Professor
University of Nebraska-Lincoln
Center for Brain, Biology & Behavior
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ACADEMIC POSITIONS

1. University of Nebraska-Lincoln 2018-present
   Position: Research Assistant Professor
2. Rutgers University-Newark 2014-2018
   Position: Postdoctoral Associate
   Mentor: Michael Cole, Ph. D.

EDUCATION AND TRAINING

1. University of Wisconsin-Milwaukee 2005-2014
   Major Professor: Fred Helmstetter, Ph. D.
   Degree: Ph. D.
   Major: Neuroscience
   Minors: Behavior Analysis, Neurobiology
   Dissertation title: Changes in resting-state functional connectivity following delay and trace fear conditioning acquisition and extinction.
2. Southwest Minnesota State University 2001-2004
   Degree: B.A.
   Major: Psychology

GRANT SUPPORT – PENDING, ACTIVE, AND PAST FUNDING

PENDING

National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK), R01. "Neural vulnerabilities for obesity: A contextualized, longitudinal study in adolescence"
Role: Co-I ($3,772,090), MPIs: Tim Nelson, Maital Neta (Psychology, UNL)

ACTIVE

National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK), R01. "Modifiable predictors of neural vulnerabilities for obesity"
Role: Co-I ($3,028,750), PI: Tim Nelson (Psychology, UNL)

University of Nebraska, Collaboration Initiative. "Translational effects of language learning and exercise interventions on cognitive aging"
Role: Co-I ($150,000), PI: Ladan Ghazi Saidi (Communication Disorders, University of Nebraska-Kearney)

Center for Brain Biology and Behavior, Seed Funding Program. "Evoking brain hemodynamics and neuroplasticity in MCA stroke survivors through repeated sensory stimulation and task dynamics (cognitive, sensorimotor, sensory)"

Role: Co-I ($16,125), PI: Steven Barlow (Special Education & Communication Disorders, UNL)

PAST

University of Nebraska, Collaboration Initiative (2020-2024). "Fighting Dementia: Clinical translational effects of learning a new language"

Role: Co-I ($150,000), PI: Ladan Ghazi Saidi (Communication Disorders, University of Nebraska-Kearney)

University of Nebraska-Lincoln, Layman Seed Award (2021-2022). "Changes in functional brain network communication in depression"

Role: PI ($10,000)

RESEARCH

PREPRINTS

Pachunka, A., Jeffries, J. B., Karr, L., Luck, L., Reiling, B., **Schultz, D.**, & Stevens, J. R. (2024). Effects of human-animal interaction on positive youth development: A replication study. https://doi.org/10.31234/osf.io/ge7bf

PEER-REVIEWED JOURNAL ARTICLES

Krishnamurthy, R., Cloud, C., Westemeyer, R., Wang, Y., **Schultz, D. H.**, & Dietsch, A. M. (2025). White Matter Microstructural Correlates of Swallowing Biomechanics: An Exploratory Pilot Study in Healthy Young Adults. Dysphagia. https://doi.org/10.1007/s00455-025-10841-3

Schultz, D. H., Bouchard, H. C., Barbot, M. C., Laing-Young, J. M., Chiao, A., Higgins, K. L., Savage, C. R., & Neta, M. (2025). Self-reported concussion history is not related to cortical volume in college athletes. PloS one, 20(4), e0319736. https://doi.org/10.1101/2024.04.03.24305266

Krishnamurthy, R., **Schultz, D. H.**, Wang, Y., Natarajan, S. K., Barlow, S. M., & Dietsch, A. M. (2025). Multimodal Adaptations to Expiratory Musculature-Targeted Resistance Training: A Preliminary Study in Healthy Young Adults. Journal of Speech, Language, and Hearing Research, 1–19. https://doi.org/10.1044/2024_JSLHR-24-00294

Schultz, D. H., Gansemer, A., Allgood, K., Gentz, M., Secilmis, L., Deldar, Z., Savage, C. R., & Ghazi Saidi, L. (2024). Second language learning in older adults modulates Stroop task performance and brain activation. Frontiers in Aging Neuroscience, 16, 1398015. https://doi.org/10.3389/fnagi.2024.1398015

Higgins, K. L., Bouchard, H. C., Maietta, J. E., Laing-Young, J. M., & **Schultz, D. H.** (2024). Valid, invalid, or somewhere in between? Baseline Immediate Post-Concussion Assessment and Cognitive Testing (ImPACT) and stand-alone performance validity testing in collegiate athletes. Psychology & Neuroscience. https://doi.org/10.1037/pne0000341

Harp, N. R., Nielsen, A. N., **Schultz, D. H.**, & Neta, M. (2024). In the face of ambiguity: Intrinsic brain organization in development predicts one's bias toward positivity or negativity. Cerebral Cortex, 34(3), bhae102. https://doi.org/10.1093/cercor/bhae102

Bouchard, H. C., Higgins, K. L., Amadon, G. K., Laing-Young, J. M., Maerlender, A., Al-Momani, S., Neta, M., Savage, C. R., & **Schultz, D. H.** (2024). Concussion-related disruptions to hub connectivity in the default mode network are related to symptoms and cognition. *Journal of Neurotrauma*, neu.2023.0089. https://doi.org/10.1089/neu.2023.0089.

Dietsch, A. M., Westemeyer, R. M., & **Schultz, D. H.** (2023). Brain activity associated with taste stimulation: A mechanism for neuroplastic change? Brain and Behavior, 13(4), e2928. https://doi.org/10.1002/brb3.2928.

Schultz, D. H., Ito, T., & Cole, M. W. (2022). Global Connectivity Fingerprints Predict the Domain Generality of Multiple-Demand Regions. *Cerebral Cortex*, bhab495. https://doi.org/10.1093/cercor/bhab495.

Ito, T., Yang, G. R., Laurent, P., **Schultz, D. H.**, & Cole, M. W. (2022). Constructing neural network models from brain data reveals representational transformations linked to adaptive behavior. *Nature Communications*, *13*(1), 673. https://doi.org/10.1038/s41467-022-28323-7.

Cocuzza, C. V., Ito, T., **Schultz, D.**, Bassett, D. S., & Cole, M. W. (2020). Flexible coordinator and switcher hubs for adaptive task control. *The Journal of Neuroscience*, *40*(36), 6949–6968. https://doi.org/10.1523/JNEUROSCI.2559-19.2020.

Botvinik-Nezer, R., Holzmeister, F., … **Schultz, D.**, …, Poldrack, R., & Schonberg, T. (2020). Variability in the analysis of a single neuroimaging dataset by many groups. *Nature, 582,* 84-88. https://doi.org/ 10.1038/s41586-020-2314-9.

Mathur, A., **Schultz, D**., & Wang, Y. (2020). Neural Bases of Phonological and Semantic Processing in Early Childhood. Brain Connectivity, 10(5), 212–223. https://doi.org/10.1089/brain.2019.0728.

Dietsch, A. M., Westemeyer, R. M., Pearson, W. G., & **Schultz, D. H.** (2019). Genetic Taster Status as a Mediator of Neural Activity and Swallowing Mechanics in Healthy Adults. Frontiers in Neuroscience, 13, 1328. https://doi.org/10.3389/fnins.2019.01328.

Cole, M. W., Ito, T., **Schultz, D.**, Mill, R., Chen, R., & Cocuzza, C. (2019). Task activations produce spurious but systematic inflation of task functional connectivity estimates. *NeuroImage*, *189*, 1–18. https://doi.org/10.1016/j.neuroimage.2018.12.054.

Schultz, D., Ito, T., Solomyak, L. I., Chen, R. H., Mill, R. D., Anticevic, A., & Cole, M. W. (2018). Global connectivity of the frontoparietal cognitive control network is related to depression symptoms in the general population. *Network Neuroscience*, 1–46. https://doi.org/10.1162/NETN_a_00056.

Ito, T., Kulkarni, K., **Schultz, D.**, Mill, R., Chen, R., Solomyak, L., & Cole, M. W. (2017). Cognitive task information is transferred between brain regions via resting-state network topology. *Nature Communications*, *8*(1). https://doi.org/10.1038/s41467-017-01000-w.

Schultz, D., & Cole, M.W. (2016). Integrated brain network architecture supports cognitive task performance. *Neuron, 92*, 278-79.

Cole, M.W., Ito, T., Bassett, D.S., & **Schultz, D.** (2016). Activity flow over resting-state networks shapes cognitive task activations. *Nature Neuroscience*. doi:10.1038/nn.4406.

Schultz, D., & Cole, M.W. (2016). Higher intelligence is associated with less task-related brain network reconfiguration. *Journal of Neuroscience*. *36*, 8551-61.

Schultz, D., Balderston, N., Baskin-Sommers, A., Larson, C., & Helmstetter, F. (2016). Psychopaths show enhanced amygdala activation during fear conditioning. *Frontiers in Psychology*, **7**:348. doi: 10.3389/fpsyg.2016.00348

Hopkins, L., **Schultz, D.**, Helmstetter, F., & Hannula, D. (2015). Eye movements index implicit memory expression in fear conditioning. *PLoS One*. (11), e0141949.

Balderston, N., Schultz, D., Hopkins, L., & Helmstetter, F. (2015). Functionally distinct amygdala subregions identified using DTI and high-resolution fMRI. *Social Cognitive and Affective Neuroscience*, *12*, 1615-22.

Balderston, N., **Schultz, D.**, Baillet, S., & Helmstetter, F. (2014). Rapid amygdala responses during trace fear conditioning without awareness. *PLoS One*. (9), e96803.

Schultz, D., & Helmstetter, F. (2013). Dissociation between implicit and explicit responses in postconditioning UCS revaluation after fear conditioning in humans. *Behavioral Neuroscience*, *127*, 357-68.

Balderston, N., **Schultz, D**., Baillet, S., & Helmstetter, F. (2013). How to detect amygdala activity with megnetoencephalography using source imaging. *Journal of Visualized Experiments* (76), e50212, doi:10.3791/50212.

Larson, C., Baskin-Sommers, A., Stout, D., Balderston, N., **Schultz, D**., Curtin, J., Kiehl, K., & Newman, J. (2013). The interplay of attention and emotion: Top-down attention modulates amygdala activation in psychopathy. *Cognitive, Affective, & Behavioral Neuroscience*. doi: 10.3758/s13415-013-0172-8.

Balderston, N., **Schultz, D**., & Helmstetter, F. (2013). The effect of threat on novelty evoked amygdala responses. *PLoS One*, 8(5): e63220. doi:10.1371/journal.pone.0063220.

Schultz, D., Balderston, N., & Helmstetter, F. (2012). Resting-state connectivity of the amygdala is altered following Pavlovian fear conditioning. *Frontiers in Human Neuroscience,* **6**:242. doi: 10.3389/fnhum.2012.00242.

Balderston, N., **Schultz, D**., & Helmstetter, F. (2011). The human amygdala plays a stimulus specific role in the detection of novelty. *Neuroimage, 55*, 1889-1898.

Schultz, D., & Helmstetter, F. (2010). Classical conditioning of autonomic fear responses is independent of contingency awareness. *Journal of Experimental Psychology: Animal Behavior Processes*, *36*, 495-500.

CONFERENCE PRESENTATIONS

Schultz, D., Barnwell, B., Bouchard, H., & Barbey, A. (2025). BOLD variability as a biomarker of concussion in college athletes. Poster presented at Cognitive Neuroscience Society conference.

Laing-Young, J., Savage, C., Nelson, T., & **Schultz, D.** (2025). Domain general and specific effects in the cognitive reappraisal of emotion and food cues. Poster presented at International Neuropsychological Society conference.

Krishnamurthy, R., Westemeyer, R., **Schultz, D**., & Dietsch, A. (2024). Hemispheric differences in white matter microstructure associated with swallowing: A tract-based spatial statistics study. Poster presented at Dysphagia Research Society conference.

Westemeyer, R., **Schultz, D.**, Krishnamurthy, R., & Dietsch, A., (2024). Neuroplastic and behavioral effects of skill- and strength-based swallowing rehabilitation regimens. Oral presentation at Dysphagia Research Society conference.

Bouchard, H., Barbot, M., Higging, K., Neta, M., Savage, C., & **Schultz, D.** (2024). Self-report concussion history is unrelated to cortical structure in collegiate athletes. Poster presented at International Neuropsychological Society conference.

Schultz, D., Gansemer, A., Yunes-Koch, A., Gentz, M., Deldar, Z., Ghasemi, O., Perrson, A., Rezac, L., Savage, C., & Ghazi Saidi, L. (2023). Effects of learning a new language on Stroop performance in older adults. Poster presented at Organization for Human Brain Mapping conference.

Laing-Young, J., Bouchard, H., Higgins, K., Maerlender, A., Neta, M., Savage, C. & **Schultz, D.** (2023). Association between brain network organization and symptom severity from baseline to post-concussion. Poster presented at National Academy of Neuropsychology conference.

Barbot, M., Bouchard, H., Laing, J., Al-Momani, S., Neta, M., Savage, C., Higgins, K., & **Schultz, D.** (2023). Concussion history is associated with structural differences in the brain in collegiate athletes. Poster presented at University of Nebraska-Lincoln Student Research Days.

Maietta, J., Higgins, K., Bouchard, H., Laing, J., & Schultz, D. (2023). Effort in ADHD/LD may be viewed on a continuum in baseline cognitive testing. Poster presented at Sports Neuropsychology Society conference.

Bouchard, H., **Schultz, D.**, Higgins, K., Laing, J., Maerlender, A., Albers, L., Neta, M., & Savage, C. (2022). Changes in default mode network hub connectivity following sports-related concussion are

related to cognitive and somatic symptom load. Poster presented at Big10-Ivy League TBI Summit conference.

Laing, J., Bouchard, H., Carlson, E., Albers, L., Maerlander, A., Tuttle, J., Higgins, K., Rodriguez, A., Mayer, M., **Schultz, D**., Neta, M., & Savage, C. (2022). Sports-related concussion results in brain network changes in collegiate athletes. Poster presented virtually at International Neuropsychological Society conference.

Bouchard, H., Laing, J., **Schultz, D**., Higgins, K., Rodriguez, A., Carlson, E., Albers, L., Tuttle, J., Mayer, M., Maerlander, A., Neta, M., & Savage, C. (2022). Disruptions with and between network connectivity involving the default mode network following sports-related concussion. Poster presented virtually at International Neuropsychological Society conference.

Schultz, D. (2021). Common brain areas support emotion regulation and cognitive control tasks. Poster presented virtually at Society for Neuroscience conference.

Harp, N., Nielsen, A., **Schultz, D**., & Neta, M. (2021). Intra-network connectivity in the cingulo-opercular network predicts variability in appraisals of emotional ambiguity in childhood development. Poster presented virtually at Society for Neuroscience conference.

Bouchard, H., Laing, J., **Schultz, D**., Carlson, E., Albers, L., Tuttle, J., Higgins, K., Rodriguez, A., Mayer, M., Neta, M., & Savage, C. (2021). Acute sports-related concussion alters within and between network connectivity involving the default mode network. Poster presented virtually at Big 10 – Ivy League TBI Summit.

Klets, A., **Schultz, D**., & Suzuki, H. (2021). Attentional control is associated with sleep depending on interhemispheric functional connectivity in the posterior cingulate cortex. Poster presented virtually at Association for Psychological Science conference.

Headley, Z., **Schultz, D**., Bouchard, H., Laing, J., Neta, M., & Savage, C. (2021). Sports-related concussion differentially impacts functional brain networks in college athletes. Poster presented virtually at University of Nebraska-Lincoln Student Research Days.

Dietsch, A., Westemeyer, R., & **Schultz, D**. (2021). Taste stimulation and brain activity: A mechanism for neuroplastic change? Poster presented virtually at Dysphagia Research Society conference.

Ito, T., Klinger, T. **Schultz, D**., Cole, M., & Rigotti, M. (2021). The role of compositional abstraction in human and artificial neural networks. Poster presented virtually at Cosyne conference.

Laing, J., **Schultz, D**., Bouchard, H., Al-Momani, S., Carlson, E., Albers, L., Tuttle, J., Mayer, M., Neta, M., & Savage, C. (2021). Alterations in brain network organization following sports-related concussion. Presented virtually at International Neuropsychological Society conference.

Anderson, E., **Schultz, D**., Wang, Y., Carlson, E., Albers, L., Tuttle, J., Mayer, M., Neta, M., Savage, C., & Barbey, A. (2021). Investigating the effects of sports-related concussion on structural brain connectivity: Evidence for altered local and global network efficieny during acute symptom management. Poster presented virtually at Society for Neuroscience Global Connectome conference.

Schultz, D., Al-Momani, S., Laing, J., Carlson, E., Albers, L., Tuttle, J., Mayer, M., Savage, C., & Neta, M. (2020). Effect of sports related concussion on resting-state functional connectivity. Poster presented at Big10-Ivy League TBI Summit Virtual conference.

Schultz, D., Ito, T., & Cole, M.W. (2020). Cognitive control networks coordinate domain general task information throughout the brain. Poster presented at Organization for Human Brain Mapping Virtual Conference.

Schultz, D., Ito, T., & Cole, M.W. (2019). Cognitive control networks balance domain generality and specificity in representing task rule information across multiple cognitive domains. Poster presented at Society for Neuroscience meeting in Chicago, IL.

Schultz, D., Ito, T., Solomyak, L., Chen, R., Mill, R., & Cole, M.W. (2018). Functional connectivity patterns systematically vary according to current task control demands. Poster presented at Organization for Human Brain Mapping meeting in Singapore.

Schultz, D., Ito, T., Solomyak, L., Chen, R., Mill, R., Kulkarni, K., & Cole, M.W. (2016). Cognitive control network global connectivity is related to the mental health of healthy individuals. Poster presented at Society for Neuroscience meeting in San Diego, CA.

Ito, T., **Schultz, D.**, Solomyak, L., Chen, R., Mill, R., & Cole, M.W. (2016). Cognitive control networks route task information to other networks via intrinsic functional connectivity pathways. Poster presented at Society for Neuroscience meeting in San Diego, CA.

Schultz, D., & Cole. M.W. (2016). Task-general and task-specifying functional brain dynamics. Poster presented at Cognitive Neuroscience Society meeting in New York, NY.

Schultz, D., & Cole, M.W. (2015). Efficiency of brain network dynamics associated with general cognitive ability. Poster presented at Society for Neuroscience meeting in Chicago, IL.

Cole, M.W., Bassett, D., & **Schultz, D.** (2015). Intrinsic and dynamic functional network architectures shape task-evoked activation patterns in the human brain. Poster presented at Society for Neuroscience meeting in Chicago, IL.

Hopkins, L., **Schultz, D.**, & Helmstetter, F., (2015). Differences in resting-state functional connectivity 24-hours after delay and trace fear conditioning. Poster presented at Society for Neuroscience meeting in Chicago, IL.

Schultz, D., & Cole, M.W. (2015). Task-general and task-specifying functional brain dynamics. Poster presented at Cognitive Neuroscience Society meeting in San Francisco, CA.

Schultz, D., Balderston, N., Hopkins, L., & Helmstetter, F. (2014). Resting-state connectivity changes during consolidation of delay and trace fear conditioning memory. Poster presented at Fourth Biennial Conference on Resting State / Connectivity meeting in Boston, MA.

Schultz, D., Balderston, N., Hopkins, L., & Helmstetter, F. (2013). Acquisition and extinction of delay and trace Pavlovian fear conditioning. Poster presented at Society for Neuroscience meeting in San Diego, CA.

Hopkins, L., **Schultz, D**., Hannula, D., & Helmstetter, F. (2013). Using eye-tracking to investigate the role of awareness in fear conditioning. Poster presented at Society for Neuroscience meeting in San Diego, CA.

Schultz, D., Balderston, N., Newman, J., Larson, C., & Helmstetter, F. (2012). Brain activity during fear conditioning in incarcerated psychopaths. Poster presented at Society for Neuroscience meeting in New Orleans, LA.

Schultz, D., Balderston, N., Hannula, D., & Helmstetter, F. (2012). Using eye movement and pupil dilation measures to examine the role of awareness in fear conditioning. Poster presented at Pavlovian Society meeting in Jersey City, NJ.

Schultz, D., Balderston, N., & Helmstetter, F. (2011). The amygdala shows increased functional connectivity with the dorsal mPFC following fear conditioning. Poster presented at Society for Neuroscience meeting in Washington DC.

Schultz, D., Balderston, N., & Helmstetter, F. (2011). The amygdala shows changes in functional connectivity following fear conditioning. Poster presented at the Pavlovian Society meeting in Milwaukee, WI.

Balderston, N., **Schultz, D**., & Helmstetter, F. (2011). Neuromagnetic amygdala responses during trace fear conditioning without awareness. Poster presented at Society for Neuroscience meeting in Washington DC.

Schultz, D., Balderston, N., & Helmstetter, F. (2010). Auditory and visual CS fear conditioning both result in modality specific changes in sensory cortex that correlate with activity in the amygdala and striatum. Poster presented at Society for Neuroscience meeting in San Diego, CA.

Balderston, N., **Schultz, D**., & Helmstetter, F. (2010). The effect of threat on novelty evoked amygdala responses. Poster presented at Society for Neuroscience meeting in San Diego, CA.

Schultz, D., Balderston, N., & Helmstetter, F. (2009). A direct comparison of differential auditory and visual fear conditioning in humans using FMRI. Poster presented at Society for Neuroscience meeting in Chicago, IL.

Balderston, N., **Schultz, D**., & Helmstetter, F. (2009). Novel faces but not scenes drive BOLD responses in the amygdala. Poster presented at Society for Neuroscience meeting in Chicago, IL.

Schultz, D., Balderston, N., & Helmstetter, F. (2009). Somatosensory cortex activation by a visual stimulus that signals shock. Poster presented at Organization for Human Brain Mapping meeting in San Francisco, CA.

Balderston, N., **Schultz, D**., & Helmstetter, F. (2009). BOLD response to novelty in the human amygdala. Poster presented at Organization for Human Brain Mapping meeting in San Francisco, CA.

Schultz, D., Balderston, N., Schramm, C., & Helmstetter, F. (2008). Conditional stimulus evoked BOLD activation overlaps with shock evoked activity in somatosensory cortex. Poster presented at Society for Neuroscience meeting in Washington DC.

Balderston, N., **Schultz, D**., Schramm, C., & Helmstetter, F. (2008). In a direct comparison of novelty and emotional valence, novelty evokes larger magnitude BOLD responses in the amygdala. Project presented at the Society for Neuroscience meeting in Washington DC.

Schramm, C., **Schultz, D**., Balderston, N., & Helmstetter, F. (2008). Impact of repeated versus novel exposure to conditional stimuli on human brain activation during Pavlovian fear conditioning. Poster presented at Society for Neuroscience meeting in Washington DC.

Schultz, D., Geiger, J., Balderston, N., & Helmstetter, F. (2007). Classical conditioning of autonomic fear responses is independent of contingency awareness. Poster presented at the Pavlovian Society meeting in Austin, TX.

Schultz, D., Geiger, J., Balderston, N., & Helmstetter, F. (2007). Classical conditioning of autonomic fear responses is independent of contingency awareness. Poster presented at Society for Neuroscience meeting in Washington DC.

Balderston, N., Geiger, J., **Schultz, D**., & Helmstetter, F. (2007). Masked presentations of simple visual stimuli and learning without awareness in human fear conditioning. Poster presented at Society for Neuroscience meeting in Washington DC.

Balderston, N., Geiger, J., **Schultz, D**., & Helmstetter, F. (2007). Learning without awareness in human fear conditioning. Poster presented at Pavlovian Society meeting in Austin, TX.

Geiger, J., **Schultz, D**., Balderston, N., & Helmstetter, F. (2007). Functional neuroimaging of context dependent fear reinstatement in humans. Poster presented at Society for Neuroscience meeting in Washington DC.

Schultz, D., Geiger, J., Balderston, N., & Helmstetter, F. (2007). Contextual modulation of human brain activity during reinstatement of conditioned fear. Poster presented at the 13th annual Organization for Human Brain Mapping meeting in Chicago, IL.

Schultz, D., Richards, J., & Helmstetter, F. (2006). UCS revaluation in human fear conditioning. Poster presented at Society for Neuroscience meeting in Washington DC.

COLLOQUIA AND PRESENTATIONS

Multiple comparison correction. University of Nebraska-Lincoln Cognition and Biopsychology in Nebraska Brown Bag. November 2019.

The application of a network neuroscience framework to examine the brain and behavior. University of Nebraska-Lincoln Cognition and Biopsychology in Nebraska Brown Bag. February 2019.

Cognitive control network global connectivity is related to depression symptoms in healthy individuals. Rutgers-Newark Center for Molecular and Behavioral Neuroscience Symposium. October 2017.

Exploring the task general network. Rutgers-Newark Brain Connectivity Brown Bag. February 2015.

Examining the consolidation of delay and trace fear memories in humans. University of Wisconsin-Milwaukee Neuroscience and Physiology Brown Bag. January 2014.

Resting-state connectivity of the amygdala is altered following fear conditioning. University of Wisconsin-Milwaukee Neuroscience and Physiology Brown Bag. December 2011.

The role of awareness in human fear conditioning. University of Wisconsin-Milwaukee Graduate Research Symposium. April 2011.

Cortical contributions to human fear conditioning. Medical College of Wisconsin Lunch and Learn Symposium. June 2010.

The effect of retention interval on postconditioning UCS inflation in human fear conditioning. Master's Thesis. May 2010.

Learning related alterations in sensory processing in human fear conditioning. University of Wisconsin-Milwaukee Graduate Research Symposium. April 2010.

The role of expectancy in human fear learning. University of Wisconsin-Milwaukee Neuroscience and Physiology Brown Bag. November 2008.

Classical conditioning of autonomic fear responses is independent of contingency awareness. University of Wisconsin-Milwaukee Graduate Research Symposium. April 2008.

A prospective FMRI study of postconditioning UCS devaluation in human fear conditioning. Medical College of Wisconsin FMRI Brown Bag. June 2007.

Postconditioning UCS devaluation in human fear conditioning. University of Wisconsin-Milwaukee Neuroscience and Physiology Brown Bag. May 2007

INVITED TALKS

Society for Neuroscience (2024): Cortical volume is not related to self-reported concussion history in college athletes.

Stony Brook Integrative Neuroscience Seminar (2023): Brain changes related to concussion: A network neuroscience perspective. (Invited by Ryan Parsons).

Big10-Ivy League TBI Summit (2022): Sports-related concussion research at the University of Nebraska-Lincoln.

University of Pennsylvania Center for Neuromodulation in Depression and Stress Speaker Series (2021): Cognitive control network properties related to depression symptoms. (Invited by Desmond Oathes, Yvette Sheline, and Nicholas Balderston).

Society for Neuroscience (2014): Changes in resting-state connectivity during the consolidation of delay and trace fear conditioning.

Rutgers University (2014): The nature of human fear memories and how these memories are stored. (Invited by Dr. Michael Cole).

TEACHING AND MENTORING

GUEST LECTURES

Analyzing MRI data (2020, 2022). Fundamentals of Neuroscience and Behavior. UNL.

Mistakes and negligence (2020). Neuroscience and Behavior: Professionalism and Ethics. UNL.

fMRI results in context (2017). Introduction to Cognitive Neuroscience. Rutgers University-Newark.

The nervous system (2007). Introduction to Psychology. University of Wisconsin-Milwaukee.

Learning and memory (2006). Introduction to Psychology. University of Wisconsin-Milwaukee.

GRADUATE STUDENTS RESEARCH SUPERVISION/COLLABORATION

Heather Bouchard, University of Nebraska-Lincoln
Julia Laing-Young, University of Nebraska-Lincoln
Ross Westemeyer, University of Nebraska-Lincoln
Rahul Krishnamurthy, University of Nebraska-Lincoln
Cara Tomaso, University of Nebraska-Lincoln

*GRADUATE SUPERVISORY COMMITTEE MEMBER (*indicates chair of committee)*

Ramsey Wilcox, University of Nebraska-Lincoln, Psychology
Allie Angebrandt, University of Nebraska-Lincoln, Psychology
Heather Bouchard, University of Nebraska-Lincoln, Psychology
*Julia Laing-Young, University of Nebraska-Lincoln, Psychology
Jacob Williams, University of Nebraska-Lincoln, Psychology
Ross Westemeyer, University of Nebraska-Lincoln, Communication Sciences and Disorders

UNDERGRADUATE CREATIVE ACTIVITIES & RESEARCH EXPERIENCES (UCARE) STUDENTS MENTORED

Bethany Barnwell (2023-2025)
Michelle Barbot (2022-2023)
Zach Headley (2020-2022)

*UNDERGRADUATE AND *HIGH SCHOOL RESEARCH ASSISTANTS*

Lauren Secilmis, Alexa Yunes-Koch, Annelie Persson, Brayan Zambrano, *Ryan Welch

SERVICE

LEADERSHIP

2022-present Executive Committee, Center for Brain, Biology and Behavior

EDITORSHIP

2022-present Review Editor, Frontiers in Behavioral Neuroscience
2021-present Review Editor, Frontiers in Psychiatry

COMMITTEE MEMBERSHIP

2024 Director of Decision Neuroscience Lab Postdoc Search Committee, UNL
2023-2024 Nebraska Athletic Performance Lab/Athletics Data Repository Committee, UNL
2022-2024 Comprehensive Research Data Strategy Task Force, UNL
2020 Athletics Research Coordinator Search Committee, UNL
2018 MRI Data Analytics Search Committee, UNL

JOURNAL REFEREE

Brain and Behavior
Brain Imaging and Behavior
Brain Structure and Function
Brain Topography
Cerebral Cortex
Cognition
Cognitive, Affective, & Behavioral Neuroscience
Communications Biology
Emotion
European Journal of Neuroscience
Frontiers in Molecular Neuroscience
Frontiers in Neuroscience
Frontiers in Psychiatry
Human Brain Mapping
Journal of Neuroscience
Nature Mental Health
Neurobiology of Learning and Memory
Neuroimage
Neuroscience
Personality Neuroscience
PLOS Biology
Psychophysiology
Scientific Reports
Social, Cognitive, and Affective Neuroscience
Symmetry
Vision

PUBLIC OUTREACH

2025 Presented to Anatomy and Physiology students at North Star High School in Lincoln, NE
2024 Presentation at Brainstorm 2.0 event to kick-off Brain Awareness Week as part of Sundays with a Scientist Program at the University of Nebraska State Museum
Interviewed by Nebraska Today
https://news.unl.edu/newsrooms/today/article/study-finds-concussions-alter-connectivity-among-brain-regions/

2023 Presented to Physics students at North Star High School in Lincoln, NE
https://www.1011now.com/2023/01/20/lps-students-learn-concussion-science-unl-expert/
https://lps.org/post/detail.cfm?id=14879

2022 Interviewed on KETV7
https://www.ketv.com/article/nu-lab-hopes-ground-breaking-concussion-research-with-help-athletes/41809488

2020 Interviewed by Nebraska Today
https://news.unl.edu/newsrooms/today/article/gray-matter-study-finds-differing-interpretations-of-brain-maps/

2016 Presentation covered by Neuroscience News
https://neurosciencenews.com/rest-brain-connectivity-tasks-4863/

MEMBERSHIP IN PROFESSIONAL SOCIETIES

American Psychological Association; Cognitive Neuroscience Society; Organization for Human Brain Mapping; Pavlovian Society; Psi Chi – National Honor Society in Psychology; Society for Neuroscience