Jarrod **Lewis-Peacock**

jalewpea@utexas.edu

Publications

Journal Articles

1. DeRosa, J., Kim, H., Lewis-Peacock, J., & Banich, M. T. (2023). Neural systems underlying the implementation of working memory removal operations. *The Journal of Neuroscience*, *44*(2), e0283232023. https://doi.org/10.1523/jneurosci.0283-23.2023
2. Zhang, Z., & Lewis-Peacock, J. A. (2023). Bend but don't break: Prioritization protects working memory from displacement but leaves it vulnerable to distortion from distraction. *Cognition*, *239*, 105574. https://doi.org/10.1016/j.cognition.2023.105574
3. Chiarello, M., Lee, J., Salinas, M. M., Hilsabeck, R. C., Lewis-Peacock, J., & Sulzer, J. (2023). The effect of biomechanical features on classification of dual-task gait. *IEEE Sensors Journal*, *23*(3), 3079–3089. https://doi.org/10.1109/jsen.2022.3227475
4. Bruning, A. L., Mallya, M. M., & Lewis-Peacock, J. A. (2023). Rumination burdens the updating of working memory. *Attention, Perception, & Psychophysics*, *85*(5), 1452–1460. https://doi.org/10.3758/s13414-022-02649-2
5. Zhang, Z., & Lewis-Peacock, J. A. (2023). Prioritization sharpens working memories but does not protect them from distraction. *Journal of Experimental Psychology: General*, *152*(4), 1158–1174. https://doi.org/10.1037/xge0001309
6. Hennings, A. C., Cooper, S. E., Lewis-Peacock, J. A., & Dunsmoor, J. E. (2022). Pattern analysis of neuroimaging data reveals novel insights on threat learning and extinction in humans. *Neuroscience & Biobehavioral Reviews*, *142*, 104918. https://doi.org/10.1016/j.neubiorev.2022.104918
7. Keller, N. E., Hennings, A. C., Leiker, E. K., Lewis-Peacock, J. A., & Dunsmoor, J. E. (2022). Rewarded extinction increases amygdalar connectivity and stabilizes long-term memory traces in the vmPFC. *The Journal of Neuroscience*, *42*(29), 5717–5729. https://doi.org/10.1523/jneurosci.0075-22.2022
8. Koslov, S. R., Bulls, L. S., & Lewis-Peacock, J. A. (2022). Distinct monitoring strategies underlie costs and performance in prospective memory. *Memory & Cognition*, *50*(8), 1772–1788. https://doi.org/10.3758/s13421-022-01275-5
9. Mallett, R., Lorenc, E. S., & Lewis-Peacock, J. A. (2022). Working memory swap errors have identifiable neural representations. *Journal of Cognitive Neuroscience*, *34*(5), 776–786. https://doi.org/10.1162/jocn_a_01831
10. Hennings, A. C., McClay, M., Drew, M. R., Lewis-Peacock, J. A., & Dunsmoor, J. E. (2022). Neural reinstatement reveals divided organization of fear and extinction memories in the human brain. *Current Biology*, *32*(2), 304–314.e5. https://doi.org/10.1016/j.cub.2021.11.004
11. Lu, H.-Y., Lorenc, E. S., Zhu, H., Kilmarx, J., Sulzer, J., Xie, C., Tobler, P. N., Watrous, A. J., Orsborn, A. L., Lewis-Peacock, J., & Santacruz, S. R. (2021). Multi-scale neural decoding and analysis. *Journal of Neural Engineering*, *18*(4), 045013. https://doi.org/10.1088/1741-2552/ac160f
12. Hennings, A. C., Lewis-Peacock, J. A., & Dunsmoor, J. E. (2021). Emotional learning retroactively enhances item memory but distorts source attribution. *Learning & Memory*, *28*(6), 178–186. https://doi.org/10.1101/lm.053371.120
13. Oblak, E., Lewis-Peacock, J., & Sulzer, J. (2021). Differential neural plasticity of individual fingers revealed by fMRI neurofeedback. *Journal of Neurophysiology*, *125*(5), 1720–1734. https://doi.org/10.1152/jn.00509.2020
14. Chiu, Y.-C., Wang, T. H., Beck, D. M., Lewis-Peacock, J. A., & Sahakyan, L. (2021). Separation of item and context in item-method directed forgetting. *NeuroImage*, *235*, 117983. https://doi.org/10.1016/j.neuroimage.2021.117983
15. Lorenc, E. S., Mallett, R., & Lewis-Peacock, J. A. (2021). Distraction in visual working memory: Resistance is not futile. *Trends in Cognitive Sciences*, *25*(3), 228–239. https://doi.org/10.1016/j.tics.2020.12.004
16. Kilmarx, J., Oblak, E., Sulzer, J., & Lewis-Peacock, J. (2021). Towards a common template for neural reinforcement of finger individuation. *Scientific Reports*, *11*(1). https://doi.org/10.1038/s41598-020-80166-8

Preprints

1. Cooper, S. E., Hennings, A. C., Bibb, S., Lewis-Peacock, J., & Dunsmoor, J. E. (2023). *Threat learning by proxy: Semantic structures facilitate emotional memory integration throughout the MTL and medial prefrontal cortex*. https://doi.org/10.31234/osf.io/c7zyh
2. DeRosa, J., Kim, H., Lewis-Peacock, J., & Banich, M. T. (2023). *Neural systems underlying the implementation of working memory removal operations*. https://doi.org/10.1101/2023.02.14.519204

3. Keller, N. E., Hennings, A. C., Leiker, E. K., Lewis-Peacock, J. A., & Dunsmoor, J. E. (2021). *Rewarded extinction increases amygdalar connectivity and stabilizes long-term memory traces in the vmPFC*. https://doi.org/10.1101/2021.12.08.471649

Books

Book Chapters

1. Lewis-Peacock, J. (2023). Forgetting. In *Encyclopedia of the human brain, 2nd edition*.
2. Lewis-Peacock, J. (2022). Curating the contents of working memory. In *Visual memory*.

Professional Presentations

Distracted Juggling: How the Brain Sifts Distractions to Stay on Task
Learning & the Brain, San Francisco, CA *2024*

Embracing Irrelevant Information in Working Memory
University of York, York, UK, Virtual *2024*

Protecting Information in Working Memory
University of Strathclyde, Glasgow, Scotland, Virtual *2023*

Temporal expectation triggers removal of irrelevant information from working memory that leads to forgetting
Society for Neuroscience, Washington, D.C. *2023*

Decoding Brain States
Washington University in St. Louis, St. Louis, MO *2023*

Behavioral impacts of removing emotional information from working memory
Working Memory Symposium *2023*

Distractions disrupt working memory in different states
Working Memory Symposium, virtual *2023*

Protecting Information in Working Memory
Cardiff University, Cardiff, Wales, UK *2023*

Removal of Information from Working Memory
Parcevall Hall, North Yorks, England, UK *2023*

Removal of item-context bindings from working memory
Working Memory Symposium, virtual *2023*

Suppressing thoughts from working memory can weaken their item-specific representations in long-term memory
Working Memory Symposium, virtual *2023*

Lingering distractor representations bias memory reports
Vision Sciences Society, St. Pete Beach, FL *2023*

Focusing Attention to Protect or Discard Information in Working Memory
University of East Anglia, Norwich, England, UK *2023*

Protection and Removal of Information in Working Memory
University of Reading, Reading, England, UK *2023*

Protection and Removal of Information in Working Memory
University of Oxford, Oxford, England *2023*

Protection and Removal of Information in Working Memory
University of York, York, England *2023*

Protection and Removal of Information in Working Memory
University College London, London, England *2023*

Disruption of Information in Working Memory
University of Cambridge, Cambridge, England *2022*

Protection of Information in Working Memory
University of Cambridge, Cambridge, England *2022*

Remembering to Forget
University of Cambridge, Cambridge, England *2022*

Protection of Information in Working Memory
University of Geneva, Geneva, Switzerland *2022*

Protection of Information in Working Memory
University of Zurich, Zurich, Switzerland *2022*

Tidying up Working Memory
University of Cambridge, Cambridge, England *2022*

Tidying up working memory
University of Toronto, Ebbinghaus Empire speaker series *2022*

Neural impacts of working memory removal operations on the long-term retention of information
Working Memory Symposium, virtual *2022*

Prioritization allows working memory to bend but not break in the face of distraction
Working Memory Symposium, virtual *2022*

Removing information from working memory
Distributed Working Memory Series *2021*

Cognitive and affective influences on working memory updating
Virtual Working Memory Symposium *2021*

Functional connectivity during the removal of information from working memory
Virtual Working Memory Symposium, virtual *2021*

Conference Abstracts

Removal of item-context bindings from working memory
Psychonomic Society, San Francisco, CA *2023*

Suppressing the maintenance of information in working memory alters long-term memory traces
Society for Neuroscience, Washington, D.C. *2023*

Anxiety and affective intrusive thinking in working memory
Longhorn Research Poster Session *2023*

Effects of mood on directed forgetting
Undergraduate Research Forum *2023*

Quantifying different types of body awareness during meditation using individualized machine learning and fMRI
Social and Affective Neuroscience Society, Santa Barbara, CA *2023*

Determining the neural representational similarity of multiple object categories during visual imagery
Real-time Functional Imaging and Neurofeedback Meeting (rtFIN), New Haven, CT *2022*

Estimating intrinsic manifold dimensionality to classify task-related information in human and non-human primate data
Biomedical Circuits and Systems Conference (BioCAS), virtual *2022*

Intrusive emotional thinking in working memory
UT Austin Longhorn Research Poster Session, Austin, TX *2022*

Neural impacts of working memory removal operations on the long-term retention of information
Society for Neuroscience, San Diego, CA *2022*

Signal intrusion explains divergent effects of visual distraction on working memory
Society for Neuroscience, San Diego, CA *2022*

A common template for neural reinforcement of finger individuation
Society for neuroscience *2021*

Emotional learning retroactively enhances item memory but distorts source attribution
Context and episodic memory symposium *2021*

The neural correlates of rewarded extinction
EUROPEAN MEETING OF HUMAN FEAR CONDITIONING *2021*

Valence and repetitive negative thoughts influence efficiency of replacing information in working memory
UNDERGRADUATE RESEARCH SYMPOSIUM *2021*

Interworm - Earworm Research
TEXAS STUDENT RESEARCH SHOWDOWN *2021*

A common template for neural reinforcement of finger individuation
Society for Neuroscience, virtual *2021*

Do earworms cause internal distraction and interfere with auditory working memory representations
UT Austin Psychology Honors Poster Session, virtual *2021*

Emotional learning retroactively enhances item memory but distorts source attribution
Context and Episodic Memory Symposium, Philadelphia, PA *2021*

Neural reinstatement reveals divided organization of fear and extinction memories in the human brain
Society for Neuroscience, virtual *2021*

The neural correlates of rewarded extinction
European Meeting of Human Fear Conditioning, virtual *2021*

Valence and repetitive negative thoughts influence efficiency of replacing information in working memory
UT Austin Undergraduate Research Symposium, virtual *2021*

Honors

Funding

Neural and Cognitive Mechanisms for Removing Emotional Information from Working Memory *NIMH, R01MH129042*
Funding: $782,097 *2022 - 2026*

Localizing and modulating competing memories of fear and safety in the human brain *NIMH, R01MH122387*
Funding: $1,623,500 *2021 - 2025*

Biasing the Forgetting of Visual Memories *National Eye Institute, R01EY028746*
Funding: $1,488,148 *2018 - 2023*

Removing and Manipulating Emotional Information in Working Memory: Cognitive and Neural Representations *NIMH, R56MH125642*

Funding: $770,369 *2021 - 2022*

Service

The University of Texas at Austin *Austin, US*

Steering Committee Member (Polymathic Scholars Program, College of Natural Sciences) *2022 - present*

The University of Texas at Austin *Austin, US*

Reviewer, Johnson & Johnson WiSTEM2D internal competition *2021 - present*

The University of Texas at Austin *Austin, US*

Graduate Advisor (Institute for Neuroscience) *2021 - present*

The University of Texas at Austin *Austin, US*

Reviewer, Outstanding Dissertation Committee, College of Liberal Arts, *2021 - present*

The University of Texas at Austin *Austin, US*

Reviewer, Research Reboot Committee, College of Liberal Arts *2021 - present*

National Institutes of Health *Bethesda, US*

F01B Fellowship Panel *2021 - present*

The University of Texas at Austin *Austin, US*

Area Head - Cognition, Brain, & Behavior *2020 - present*

Journal of Cognitive Neuroscience *NA, US*

Consulting Editor *2020 - present*

National Science Foundation *Alexandria, US*

Cognitive Neuroscience Panel *2020 - present*

Working Memory Symposium *virtual, global, US*

Co-founder and organizer *2020 - present*

C-11 Research Policy Comittee *Austin, US*

Member *2021 - 2024*

The University of Texas at Austin *Austin, US*

DEI Faculty Liaisons *2021 - 2023*

Memory Disorders Research Society *virtual, US*

Co-organizer of 2021 annual meeting *2021 - 2021*

Mentoring and Teaching

Mentoring

Hyojeong Kim

Postdoctoral supervisor *2023 - present*

Edward Leung

Dissertation Supervisor *2022 - present*

Laura Werner

Postdoctoral Supervisor *2022 - present*

Caleb Jerinic-Brodeur

Dissertation Supervisor *2022 - present*

Ziyao Zhang

Dissertation Supervisor *2021 - present*

Zachary Bretton-Granatoor

Dissertation Supervisor — *2020 - present*

Yanni Jiang

CBB Practicum Supervisor — *2024 - 2024*

Diane Whitmer

Postdoctoral Supervisor — *2022 - 2023*

Justin Kilmarx

Dissertation co-Supervisor — *2018 - 2023*

Elizabeth Lorenc

Postdoctoral Supervisor — *2018 - 2022*

Augustin Hennings

Dissertation co-Supervisor — *2017 - 2022*

Remington Mallett

Dissertation Supervisor — *2016 - 2021*

Teaching

PSY 420M

Instructor — *2024 - 2024*

PSY 355N (Cognitive Neuroscience)

Instructor — *2024 - 2024*

PSY 420M

Instructor — *2023 - 2023*

PSY 420M Research Design & Statistics

Instructor — *2022 - 2022*

PSY 387S Principles of Cognitive Neuroscience

Instructor — *2021 - 2021*

PSY 394P Digital Neuroanatomy

Instructor (with Franco Pestilli) — *2021 - 2021*