Phillip Witkowski, PhD

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Postdoctoral Fellow – Learning and Decision-Making Unit, National Institute of Drug Abuse

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Publications

1. **Witkowski, Phillip P**., Park, Seongmin A., Boorman Erie D., (2022) Neural mechanisms of credit assignment for inferred relationships in a structured world, *Neuron*
2. **Witkowski, Phillip P.**, Geng, Joy J., *(*2022*)* Attentional priority is determined by predicted feature distributions, *Journal of Experimental Psychology: Human Perception and Performance*
3. Won, B.Y., Ventakesh. A, **Witkowski, Phillip P. P.**, Banh, T. Geng, Joy J. (2021*)* Memory Precision for salient distractors decreases with learned suppression. *Psychonomic Bulletin and Review*
4. Boorman, Erie D., **Witkowski, Phillip P. P**., Zhang, Y., Park, S.A. (2021). The orbital frontal cortex, task structure, and inference. *Behavioral Neuroscience*
5. **Witkowski, Phillip P**., Geng, Joy J., (2019). Expected feature variance is encoded in the target template and drives visual search**.** *Visual Cognition*
6. Geng, Joy J., **Witkowski, Phillip P**., (2019). Template – to – distractor distinctiveness regulates visual Search Efficiency. *Current Opinion in Psychology*

In Prep:

1. **Witkowski, Phillip P**., Geng, Joy J. (*In preparation*) Probabilistic Codes for Predicted Search Targets in Prefrontal and Sensory Cortex
2. Zhang, Yanchang L., **Witkowski, Phillip P**., Park, Seongmin A., Boorman Erie D., (*In preparation*) Neural Representation of Latent Cause During Credit Assignment
3. Rondot, Lindsay L.*, **Witkowski, Phillip P***., Boorman Erie D., (*In preparation*) Neural Mechanisms for Delayed Model-based Credit Assignment in Prefrontal Cortex

*Denotes shared first authorship

Presentations

Talks:

- Zhang, Y.L., Witkowski, P.P*, Park S.A, Boorman, E.D., (2022). Neural Representations for of Causal Stimulus During Credit Assignment – Society for Neuroscience
- Zhang, Y.L., Witkowski, P.P*, Park S.A, Boorman, E.D., (2022). Neural Representations for of Causal Stimulus During Credit Assignment – Society for Neuroscience
- Witkowski, P.P.*, Park S.A, Boorman, E.D., (2022). Mechanisms of Credit Assignment for Inferred Relationships in a Structured World – Computational Cognitive Neuroscience
- Witkowski, P.P.* & Geng, J.J, (2021). Information Value Underlies Priority in Feature Based Attention – Vision Science Society
- Witkowski, P.P.* & Geng, J.J, (2021). Predictions Determine Contents of the Attentional Template – Psychology Department Conference, UCD
- Witkowski, P.P.* & Geng, J.J, (2021). Information Sampling in Predictive Attentional Templates – Center for Vision Science Annual Symposium
- Witkowski, P.P.* & Geng, J.J, (2019). Learned Feature Variability Predicts Visual Search and Template Precision – Cognitive Neuroscience Society

Conference Posters:

- Witkowski, P.P. & Geng, J.J, (2022), Representations of Predicted Uncertainty in Frontal and Sensory Cortex Prior to Search – Vision Sciences Society
- Witkowski, P.P., Park, S.A., Boorman, E.D., (2022), Neural mechanisms of credit assignment for inferred relationships in a structured world – Cognitive Neuroscience Society
- Witkowski, P.P. & Geng, J.J, (2021), Learned predictions about feature distributions determine feature-based attentional priority – Expectation, Perception and Cognition
- Witkowski, P.P. & Geng, J.J, (2020), Feature Uncertainty is Tracked by Predictive Attentional Templates – Vision Sciences Society
- Witkowski, P.P. & Geng, J.J, (2019), Learned Feature Variability Predicts Visual Search and Working Memory Precision – Vision Sciences Society
- Witkowski, P.P., Park, S.A., Boorman, E.D., (2018), Architecture of Representations in Pre-frontal Cortex During Credit Assignment – Society for Neuroscience
- Witkowski, P.P., Park, S.A., Boorman, E.D., (2018), Adaptive Credit Assignment in prefrontal Cortex – Society for Neuroeconomics
- Witkowski, P.P., Park, S.A., Boorman, E.D., (2018), Architecture of Representations in Pre-frontal Cortex During Credit Assignment – Bay Area Memory Meeting
- Witkowski, P.P. & Geng, J.J, (2016), Statistical Representations Increase Search Efficiency When Predictive of Target Location – Vision Sciences Society

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Education

University of California, Davis — **GPA**: 3.98/4.0

Bachelor of Arts in Psychology	*summa cum laude* June, 2016
Bachelor of Arts in Anthropology	*cum laude* June, 2016
Masters in Psychology	June, 2020
PhD in Psychology	June. 2023

Awards/Honors

1.	UCD Psychology Department Dissertation Year Fellowship	2023
2.	UC Davis Psychology Graduate Student Award: Outstanding Research	2022
3.	National Eye Institute Early Career Scientist Travel Grant	2022
4.	Best Student Poster, Expectation, Perception and Cognition Workshop	2021
5.	1st Place Award for Best Talk, UCD Annual Psychology Conference	2021
6.	Elsevier/*Vision Research* Travel Award	2021
7.	Kavli Summer Institute in Cognitive Neuroscience Fellow	2019
8.	T32 Vision Sciences Training Grant	2018
9.	Graduate Student Association Travel Award	2018
10.	Dukes Travel Award	2017
11.	Citation of Outstanding Performance – Department of Psychology UC Davis	2016
12.	Citation of Outstanding Performance – Department of Anthropology UC Davis	2016
13.	City College Memorial Scholarship – City College of San Francisco	2014

Research Experience

Postdoctoral Fellow, Learning and Decision-Making Unit, NIDA	June. 2023 - Present
Graduate Student, Integrated Attention Lab, UC Davis	Sept. 2017 – June. 2023
Graduate Student, Learning and Decision-Making Lab, UC Davis	Sept. 2017 – June. 2023
Junior Specialist, Learning and Decision-Making Lab, UC Davis	Sept. 2016 – Sept. 2017

Research Assistant, Integrated Attention Lab, UC Davis Feb. 2015 – Sept. 2017

Teaching Experience

Teaching Assistant for Neuroeconomics – UC Davis	2022
Teaching Assistant for Research Methods – UC Davis	2021
Teaching Assistant for Cognitive Neuroscience – UC Davis	2017, 2021
Teaching Assistant for Cognitive Psychology – UC Davis	2020
Teaching Assistant for Perception – UC Davis	2017

Open Science Contributions

SCORE Program (Center for Open Science) 2021

RepliCats Project 2020

Rated scientific claims from psychological papers for replicability of methods and results

Service as Peer Reviewer

Nature Communications	2023
Journal of Neuroscience (2 manuscripts)	2022
Attention, Perception and Psychophysics	2022