



Exponent[®]
Engineering & Scientific Consulting

Kyra Phillips Phillips, Ph.D.

Scientist | Human Factors

Los Angeles

+1-310-754-2728 phillipsk@exponent.com

Professional Profile

Dr. Phillips has extensive training in the areas of attention, signal detection and response, perceptual sensitivity, inhibitory control and how these factors contribute to performance. She applies her expertise to address and analyze human factors contributions to vehicular, bicyclist and pedestrian accidents, trips, slips and falls, and accidents involving consumer products.

Dr. Phillips utilizes her knowledge of human cognition, perception and behavior to design and conduct experiments to further our insights and datasets regarding the accuracy, preparedness, and responsiveness of individuals, and how these human variables interact with environmental factors.

Dr. Phillips joined Exponent after receiving her PhD in psychology from the University of Michigan. Combining neural manipulations with large behavioral datasets, her research focused on individual differences in cognitive and neurobiological mechanisms for attention and signal detection. In her examination of these mechanisms, Dr. Phillips investigated how specific signal properties – brightness, duration, relationship to the environment, prior experience – contributed to response behavior. In addition to research endeavors, she was an instructor on the neuropsychology of executive functions (i.e. attention, decision-making, inhibitory control) for the Psychology department at the University of Michigan.

Academic Credentials & Professional Honors

Ph.D., Psychology, University of Michigan, Ann Arbor, 2019

M.S., Psychology, University of Michigan, Ann Arbor, 2015

B.A., Psychology, University of California, Los Angeles (UCLA), 2013

Licenses and Certifications

American Sailing Association Certification, 101

American Sailing Association Certification, 103

American Sailing Association Certification, 104

Academic Appointments

Instructor, Psychology, University of Michigan, 2018

Professional Affiliations

Human Factors and Ergonomics Society (member)

Publications

King, D. R., Gold, A., Phillips, K. B., & Krauss, D. A. (2022, September). Headway times on urban, multiple lane freeways. In *Proceedings of the Human Factors and Ergonomics Society Annual Meeting* (Vol. 66, No. 1, pp. 1225-1229). Sage CA: Los Angeles, CA: SAGE Publications.

King, D. R., Phillips, K. B., & Krauss, D. A. (2022, September). Knowledge of state-recommended following-distance rules. In *Proceedings of the Human Factors and Ergonomics Society Annual Meeting* (Vol. 66, No. 1, pp. 878-882). Sage CA: Los Angeles, CA: SAGE Publications.

Park, J. I., King, D. R., Jonas, R. K., & Phillips, K. B. (2022, September). An observational study of skier and snowboarder chairlift lap bar, helmet, and snow goggle usage. In *Proceedings of the Human Factors and Ergonomics Society Annual Meeting* (Vol. 66, No. 1, pp. 1330-1334). Sage CA: Los Angeles, CA: SAGE Publications.

Phillips, K. B., Byrne, K. N., Kolarik, B. S., Krake, A. K., Bui, Y. C., & Krauss, D. A. (2021, September). Impacts of social distancing on pedestrian behavior and risk perception. In *Proceedings of the Human Factors and Ergonomics Society Annual Meeting* (Vol. 65, No. 1, pp. 1302-1306). Sage CA: Los Angeles, CA: Sage Publications.

Kolarik, B. S., Phillips, K. B., Zimmermann, J. F., & Krauss, D. A. (2020, December). Driver stopping behavior at stop-controlled intersections with sightline limitations. In *Proceedings of the Human Factors and Ergonomics Society Annual Meeting* (Vol. 64, No. 1, pp. 1471-1475). Sage CA: Los Angeles, CA: SAGE Publications.

Phillips, K. B., & Sarter, M. (2020). Addiction vulnerability and the processing of significant cues: Sign-, but not goal-, tracker perceptual sensitivity relies on cue salience. *Behavioral neuroscience*, 134(2), 133.

Kucinski, A., Phillips, K. B., Koshy Cherian, A., & Sarter, M. (2020). Rescuing the attentional performance of rats with cholinergic losses by the M1 positive allosteric modulator TAK-071. *Psychopharmacology*, 237, 137-153.

Sarter M, Phillips KB. The neuroscience of cognitive-motivational styles: sign- and goal-trackers as animal models. *Behavioral Neuroscience* 2018; 132:1–12.

Pitchers KK, Phillips KB, Jones JL, Robinson TE, Sarter M. Diverse roads to relapse: A discriminative cue signaling cocaine availability is more effective in renewing cocaine-seeking in goal-trackers than sign-trackers, and depends on basal forebrain cholinergic activity; 37(30):7198-7208.

Presentations

Phillips KB, Rysztak L, Sarter M. Resource depletion versus increased opportunity costs: a test of competing theories in rats performing a sustained attention task. Poster presentation, 49th Society for Neuroscience Conference, San Diego, CA, 2018.

Phillips KB, Rysztak L, Sarter M. Distinguishing between the contributions of depletion of processing resources and increases in opportunity costs to decline in attentional performance. 27th International Behavioral Neuroscience Society Conference, Boca Raton, Florida, 2018.

Phillips, KB, Sarter, M. Distinguishing between the contributions of depletion of processing resources and increases in opportunity costs to decline in attentional performance. 48th Society for Neuroscience Conference, Washington D.C., 2017.

Pitchers K, Phillips K., Jones JL, Robinson TE, Sarter M. Relapse depends on the type of cue and the type of brain: A cue that signals cocaine availability reinstates drug-seeking more readily in goal-trackers than sign-trackers and depends on basal forebrain cholinergic activity. 48th Society for Neuroscience Conference, Washington D.C., 2017.

Phillips KB, Sarter M. (2016). Cholinergic-dependent shifts to cue-directed behavior. 47th Society for Neuroscience Conference, San Diego, CA, 2016.

Phillips K, Kucinski A, Albin R, Sarter M. Impairments in gait, posture and complex movement control in rats modeling the multi-system, cholinergic-dopaminergic losses in PD. 45th Society for Neuroscience Conference, Washington D.C, 2014.