



205 NE Northlake Way
Suite 100
Seattle, WA 98105
+1 206.906.9090



GuidanceEngineering.com

ROBYN BRINKERHOFF, PHD

Senior Human Factors Scientist

Dr. Brinkerhoff has expertise in visual and auditory perception, cognition, decision-making and reaction time, and the effects of inattention, distraction, training, and experience on human information processing and performance. She analyzes human factors and human performance issues in a wide array of contexts including product warnings and safety information; pedestrian slips, trips, and falls; automobile, motorcycle, and bicycle accidents; use of consumer products; fitness facilities and exercise equipment; and eyewitness perception and memory. Dr. Brinkerhoff has conducted research in visual perception, effects of lighting/illuminance, auditory alarm perception, driver behavior, driver use of in-vehicle technologies, driver errors, pedal errors, fall risk, store-related injuries, the development of response capabilities in youths, and reaction time. She uses a variety of research methods, including quantitative injury and risk analyses, anthropometric analyses, human subjects testing, survey questionnaires and focus groups. In addition, Dr. Brinkerhoff has taught undergraduate and graduate courses in Human Factors and Human Motor Control (Kinesiology) at California State University Long Beach.

Dr. Brinkerhoff earned a Ph.D. in Psychology from UCLA, with a specialization in cognitive neuroscience. Her graduate research employed behavioral, psychophysical, and neuroimaging methods to investigate multisensory integration, particularly the effects of training with audiovisual stimuli on visual perception and associative learning. Dr. Brinkerhoff's graduate work was supported by awards from the University of California, and the National Science Foundation. Her research also garnered awards from the Vision Sciences Society and the International Multisensory Research Forum. After earning her Ph.D., Dr. Brinkerhoff designed and piloted a novel multidisciplinary research program applying brain stimulation techniques to perceptual learning protocols, in order to study mechanisms of plasticity in visual motion perception.

Academic Credentials and Professional Honors

Ph.D., Psychology (Cognitive Neuroscience), University of California, Los Angeles, 2009
M.A., Psychology (Cognitive Neuroscience), University of California, Los Angeles, 2005
B.A., English, Columbia College, 1999

National Science Foundation Graduate Research Fellowship, 2005–2009

Vision Sciences Society Student Travel Award, 2008

International Multisensory Research Forum Graduate Student Symposium Award, 2006

UCLA Edwin W. Pauley Fellowship, 2004

Academic Appointments

Lecturer, Kinesiology, California State University Long Beach, 2016, 2017
Lecturer, Human Factors, California State University Long Beach, 2014
Postdoctoral Research Fellow, Department of Psychology, UCLA, 2009–2010
Postdoctoral Research Fellow, Department of Psychology, UC Riverside, 2009

Certifications

Certified *XL* Tribometrist, CXLTL, for floor slip resistance measurements

Publications (also as Kim R)

Salipur Z, Krake A, Brinkerhoff R, Young D. Accessibility of U-Haul Rental Vehicles. RESNA Annual Conference-2021.

Brinkerhoff R, Crump C, Jonas R, Krake A, Cloninger C, Cades D, Young D. Driver visual errors in automobile crashes at four-way intersections. Transportation Research Board 2020 Annual Meeting, Paper 20-01474.

Jonas R, Crump C, Brinkerhoff R, Krake A, Watson H, Young D. Variability in circumstances underlying pedal errors: An investigation using the National Motor Vehicle Crash Causation Survey. SAE Technical Paper 2018-01-0493, 2018, doi:10.4271/2018-01-0493.

Crump C, Brinkerhoff R, Young D. Passenger seat belt usage rates on shuttle buses. Proceedings, Human Factors and Ergonomics Society Annual Meeting 2017; 61(1): 1674-1678. during on-road stopping in an older population. SAE 2017-01-1396, 2017.

Kim R, Lester B, Schwark J, Cades D, Hashish R, Moorman H, Young D. Gaze behavior during curb approach: The effect of mobile device use while walking. Proceedings, Human Factors and Ergonomics Society Annual Meeting 2016; 60(1): 1580-1584.

Lester B, Hashish R, Kim R, Hildebrand E, Moorman H, Rauschenberger, R, Young D. Mobile device usage influences gaze patterns to obstacles during locomotion. ISERC Proceedings 2016.

Sharpe S, Brinkerhoff R, Crump C, Young D. Accelerator-to-brake pedal transition movements

Kim R, Crump C, Harley E, Nauhaus G, Yigit-Elliott S. Store-related injuries to children and adults. Proceedings, Human Factors and Ergonomics Society Annual Meeting 2015; 59(1):1457–1461.

Cades D, Kim R, Krauss D. In-vehicle technology and the driver. In: Forensic Aspects of Driver Perception and Response. 4th Edition. Krauss D (ed), Tucson, AZ: Lawyers and Judges Publishing Company, Inc., 2015.



Kim R, Rauschenberger R, Heckman G, Young D, Lange R. Efficacy and usage patterns for three types of rear-view camera displays during backing up. SAE 2012-01-0287, 2012.

Heckman GM, Kim RS, Lin S, Rauschenberger R, Young DE, Lange R. Drivers' visual behavior during backing tasks: Factors affecting the use of rearview camera displays. Proceedings, Human Factors and Ergonomics Society Annual Meeting 2012; 56:2236–2240.

Shams L, Kim R. Crossmodal facilitation of unisensory learning. In: The New Handbook of Multisensory Processes. Stein B, Stanford T (eds), 2012.

Kim R, Peters M, Shams L. 0+1>1: How adding non-informative sound improves performance on a visual task. Psychological Science 2011; 23(1):6–12.

Heckman GM, Kim RS, Khan FS, Bare C, Yamaguchi GT. Auditory localization of backup alarms: The effects of alarm mounting location. SAE 2011-01-0086, 2011.

Young D, Heckman G, Kim R. Human factors in sudden acceleration incidents. Proceedings, Human Factors and Ergonomics Society Annual Meeting 2011; 55:1938–1942.

Krauss DA, Todd JJ, Kim R, Scher I. A risk analysis of fall-related injuries using the NEISS Database. Proceedings, Human Factors and Ergonomics Society Annual Meeting 2011; 55:1462–1466.

Shams L, Wozny DR, Kim R, Seitz A. Influences of multi-sensory experience on subsequent unisensory processing. Frontiers in Psychology 2011; 2: 264. doi:10.3389/fpsyg.2011.00264.

Shams L, Kim R. Crossmodal influences on visual perception. Physics of Life Reviews, online. doi:10.1016/j.plrev.2010.04.006.

Kim R, Seitz AR, Feenstra H, Shams L. Testing assumptions of statistical learning: Is it long-term and implicit? Neuroscience Letters 2009; 461(2):145–149.

Kim R, Seitz AR, Shams L. Benefits of stimulus congruency for multisensory facilitation of visual learning. PLoS ONE 2008; 3(1).

Seitz AR, Kim R, van Wassenhove V, Shams L. Simultaneous and independent acquisition of multisensory and unisensory associations. Perception 2007; 36:1445–1453.

Seitz AR, Kim R, Shams L. Sound facilitates visual learning. Current Biology 2006; 16(14):1422–1427.



Conference Presentations (also as Kim R)

Brinkerhoff R, Crump C, Nauhaus G. The impact of natural shadows on visibility. 9th International Conference on Applied Human Factors and Ergonomics, Orlando, FL, July, 2018.

Heckman GM, Kim RS, Lin S, Rauschenberger R, Young DE, Lange R. Drivers' visual behavior during backing tasks: Factors affecting the use of rearview camera displays. Human Factors and Ergonomics Society Annual Meeting, Boston, MA, September, 2012.

Young D, Heckman G, Kim R. Human factors in sudden acceleration incidents. Human Factors and Ergonomics Society Annual Meeting, Las Vegas, NV, September, 2011.

Krauss DA, Todd JJ, Kim R, Scher I. A risk analysis of fall-related injuries using the NEISS Database. Poster presentation, Human Factors and Ergonomics Society Annual Meeting, Las Vegas, NV, September, 2011.

Kim R, Seitz AR, Shams L. Statistical learning of crossmodal associations is better than unisensory associations. Poster presentation, International Multisensory Research Forum 10th Annual Meeting, New York, NY, June/July, 2009.

Kim R, Seitz AR, Shams L. Neural mechanisms of multisensory perceptual learning. Vision Sciences Society 8th Annual Meeting, Naples, FL, May, 2008.

Kim R, Seitz AR, Shams L. Congruent sound facilitates visual perceptual learning. Society for Neuroscience 37th Annual Meeting, San Diego, CA, November, 2007.

Kim R, Seitz AR, Shams L. Visual perceptual learning enhanced with congruent sound. Poster Presentation, Vision Sciences Society 7th Annual Meeting, Sarasota, FL, May, 2007.

Kim R, Seitz AR, Shams L. Sound facilitates visual perceptual learning. International Multisensory Research Forum 7th Annual Meeting, Dublin, Ireland, June, 2006.

Kim R, Seitz AR, Shams L. Sound aids visual perceptual learning. Poster Presentation, Vision Sciences Society 6th Annual Meeting, Sarasota, FL, May, 2006.

Peer Reviewer

Experimental Brain Research
Frontiers in Neuroscience
Human Factors and Ergonomics Society
Journal of Experimental Psychology
Journal of Vision
Neurobiology of Aging
Perception



Professional Affiliations

Association of Fitness Studios
Human Factors and Ergonomics Society
Society of Automotive Engineers
Vision Sciences Society

