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Engineering & Scientific Consulting

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Professional Profile

Ms. Krake analyzes human factors and human performance in the context of use of consumer products, including sports and exercise equipment; driver and pedestrian behavior; and slips, trips and falls. She utilizes her expertise in human movement and information-processing to evaluate issues related to motor control, executive function, decision-making, reaction time, and the effects of inattention and distraction, as they relate to accidents, injuries, product usage, vehicle operation, fitness training and technique. She has professional experience in the sports and recreation industry, including product testing, development and performance. In addition, Ms. Krake has extensive experience in collecting electromyography (EMG), and tracking and analyzing kinematics using high-speed motion capture systems.

Ms. Krake earned a Master's degree in Kinesiology from California State University Long Beach, with a specialty in Exercise Science. In addition, she trained professional racecar drivers.

Academic Credentials & Professional Honors

M.S., Kinesiology, California State University, Long Beach, 2017

B.S., Psychology, University of California, Davis, 2013

Licenses and Certifications

Certified English XL Tribometrist (CXLT)

Academic Appointments

Graduate Assistant, Department of Kinesiology, California State University Long Beach, 2016-2017

Movement Science Laboratory Manager, Department of Kinesiology, California State University Long Beach, 2016-2017

Professional Affiliations

Human Factors and Ergonomics Society, 2017-present

Society for Automotive Engineers, 2017-present

Publications

Salipur Z, Krake A, Brinkerhoff R, Young D. Accessibility of truck and van rental vehicles. Annual RESNA 2021 (Virtual) conference, in press.

Phillips K, Byrne K, Kolarik B, Krake A, Bui Y, Krauss D. Impacts of Social Distancing on Pedestrian Behavior and Risk Perception. HFES 2021 International Annual Meeting, in press.

Krake A, Jonas R, Hoyos C, Crump C, Lester B, Cades C, Harrington R. Effects of Training on Learning and Use of an Adaptive Cruise Control System. SAE Technical Paper 2020-01-1033, 2020.

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, in press.

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.

Moorman H, Niles A., Crump C, Krake A, et al. Lane-keeping behavior and cognitive load with use of lane departure warning. SAE Technical Paper 2017-01-1407, 2017, doi:10.4271/2017-01-1407.

Crump C, Krake A, Lester BD, Moorman HG, Cades DM, Young D. Driver behavior with passive and active vehicle safety systems. TRB Annual Meeting, 2017.

Presentations

Krake A, Jonas R, Hoyos C, Crump C, et al. Effects of Training on Learning and Use of an Adaptive Cruise Control System. Presentation at the SAE WCX Digital Summit, June 2020.

Jonas R, Crump C, Brinkerhoff R, Krake A, Watson H, Young D (2018, April). Variability in Circumstances Underlying Pedal Errors: An Investigation Using the National Motor Vehicle Crash Causation Survey. Presentation at the Society of Automotive Engineers World Congress Experience, Detroit, MI.

Crump C, Krake A, Lester BD, Moorman HG, Cades DM, Young D. Driver behavior with passive and active vehicle safety systems. Poster presented at the Transportation Research Board Annual Meeting, Washington, D. C., 2017.

Technical Blogs

Brinkerhoff, R. & Krake, A. Fitness Studio Risk Assessment: An Expert's Guide. AFS Blog. Association of Fitness Studios. April 3, 2019. <https://member.afsfitness.com/content/fitness-studio-risk-assessment-expert%E2%80%99sguide>

Krake, A. & Brinkerhoff, R. Injury Incident Response: Tips from an Expert. AFS Blog. Association of Fitness Studios. November 9, 2019. <https://member.afsfitness.com/content/injury-incident-response-tips-expert>

Brinkerhoff, R. & Krake, A. Virtual Fitness Classes: Safety Tips for Home Workouts. AFS Blog. Association of Fitness Studios. May 8, 2020. <https://member.afsfitness.com/content/virtual-fitness-classes-safety-tips-homeworkouts>

Krake, A. & Brinkerhoff, R. Impact of COVID-19 on Fitness Habits: A Survey. AFS Blog. Association of Fitness Studios. December 15, 2020. <https://member.afsfitness.com/content/impact-covid-19-fitness-habits-survey>