



Exponent[®]
Engineering & Scientific Consulting

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Professional Profile

Dr. Cloninger specializes in the study of visual and auditory sensation and perception. She has a background in cognitive and behavioral neuroscience investigating human motor behavior, motion processing and sensory perception using eye-tracking, behavioral measurements, and computational methods. She currently applies her expertise to investigate human factors in transportation accidents, warning compliance, as well as slips, trips and falls.

Prior to joining Exponent, Dr. Cloninger completed her graduate studies at the University of Rochester, where she studied sensory neuroscience. Her work there examined auditory motion processing in humans, using eye and head movement tracking as behavioral outputs of auditory perception. She has extensive experience in human subject research, experimental design, and data analysis, including teaching and communicating complex scientific topics to a wide variety of audiences.

Academic Credentials & Professional Honors

M.S., Anatomy, University of Rochester, 2013

B.A., Psychology, Grinnell College, with honors, 2008

Ph.D., Anatomy, University of Rochester Medical Center, 2016

Licenses and Certifications

Certified English XL Tribometrist (CXLT)

Publications

Brinkerhoff R, Crump C, Jonas R, Krake A, Cloninger C, Cades DM, Young D. Driver visual errors in automobile crashes at four-way intersections. TRB Annual Meeting, 2020.

Moorman HG, Niles A, Crump C, Krake A, Lester BD, Milan L, Cloninger C, Cades DM, Young D. Lanekeeping behavior and cognitive load with use of lane departure warning. SAE Technical Paper 2017-01-1407, 2017, doi:10.4271/2017-01-1407.

Baisley SK, Cloninger CL, Bakshi VP. Fos expression following regimens of predator stress versus footshock that differentially affect prepulse inhibition in rats. *Physiology & Behavior* 2011; 104:796-803.

Other Publications

Cloninger C, Cades DM, Nauhaus G, Harley E. Reconstructing witnessed events: Sources of error in eyewitness perception and memory. Feature Article in The Illinois Association of Defense Trial Counsel IDC Quarterly 2019; 29 (1).

Cades DM, Carey MR, Crump C, Cloninger C, Young D. Drivers and driverless vehicle revolution: understanding the changing role of the driver. Westlaw Journal Automotive 36 (24), May 31, 2017.

Cades DM, Crump C, Cloninger C, Young D. Drivers and driverless vehicle revolution: understanding the changing role of the driver. Article at the Defense Research Institute's Product Liability Meeting 2017. Las Vegas, Nevada.

Presentations

Cloninger CL, Allen PD, Fleming JT, O'Neill WE, Paige GD. Smooth pursuit eye and gaze movements to moving auditory targets: Evidence for velocity-specific processing in the auditory system. Talk presented at Acoustical Society of America Meeting, Spring 2015.

Cloninger CL, Fleming JT, Allen PD, O'Neill WE, Paige GD. Smooth pursuit to auditory motion resembles visual pursuit for prediction and extinction. Poster presented at Association for Research in Otolaryngology Midwinter Meeting 2015.

Cloninger CL, Allen PD, Fleming JT, O'Neill WE, Paige GD. Smooth pursuit eye movements of auditory targets suggest motion-specific processing. Poster presented at Gordon Research Conference on The Auditory System, 2014.

Cloninger CL, Allen PD, Fleming JT, O'Neill WE, Paige GD. Auditory motion elicits ocular smooth pursuit to real (free-field) but not simulated (dichotic) auditory targets. Poster presented at Association for Research in Otolaryngology Midwinter Meeting, 2014.

Cloninger CL, Allen PD, Clark EC, O'Neill WE, Paige GD. Smooth pursuit eye movements during tracking of auditory targets suggest motion specific processing. Poster presented at Tucker-Davis Technologies Symposium on Advances and Perspectives in Auditory Neurophysiology 2013.