Investigators: Emily O. Garnett, M.S., CCC-SLP, PhD candidate & Dirk-Bart den Ouden, PhD, University of South Carolina

Title: Effects of cortical stimulation on self-monitoring performance in people who stutter

Previous research has shown functional and structural neurological differences between people who stutter (PWS) and controls, but the precise cause of stuttering is still unknown. Psycholinguistic theories have attempted to account for stuttering by positing disrupted phonological encoding during speech planning. Additionally, previous functional neuroimaging studies have implicated the left posterior superior temporal gyrus (pSTG) in tasks designed to access this stage of the speech plan. One method of brain stimulation, High Definition Transcranial Direct Current Stimulation (HD-tDCS), a safe, non-invasive, low-current method of brain stimulation using small electrodes placed on the scalp. HD-tDCS can provide detailed information regarding neural involvement during particular tasks. The current study aims to determine the extent to which covert phoneme monitoring, a task related to phonological encoding, can be affected by stimulating left pSTG.

We are recruiting approximately 20 adult PWS to participate in this study. The study takes place in Columbia, SC and funds are available for participant travel reimbursement. Please contact Emily Garnett at garnette@email.sc.edu for more information or to participate.