Current TMS Research: Implications for Recovery and Rehabilitation from Neurological Conditions

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Transcranial Magnetic Stimulation is refers to a technique by which electrodeless stimulation of the cells is produced by a rapid oscillation in electrical and then magnetic energy. If activated over the skull, it allows access to a network of anatomically and functionally related brain regions through local non-invasive stimulation of the cortex. It influences deeper brain structures through neuronal conduction.

Work with TMS spans investigations of motor electrophysiology to using it as a tool to modulate (and possibly regulate) dysfunctional brain regions. We will present the scope of research at the Brain Stimulation Laboratory at MUSC and offer ideas on how TMS alone, or in combination with imaging can be integrated in stroke and rehabilitation research.