

Docket #: S23-406

Apparatus and method for efficient combined vibrotactile and electrotactile stimulation for the therapy of disorders of the nervous system

The Tass Lab has invented non-invasive, Vibrotactile Coordinated Reset (vCR) stimulation devices and methods to safely and efficiently treat brain disorders characterized by abnormal neuronal synchrony such as Parkinson's disease.

The invention enables more effective non-invasive stimulation, by combining vibrotactile and electrotactile stimulation. This new, hybrid stimulation achieves physiologically more effective non-invasive stimulation at considerably lower vibration amplitudes and, hence, significantly reduced noise levels. In addition, the combination of vibrotactile and electrotactile stimulation modalities, realizes a considerably larger inventory of effective stimuli. This increases therapeutic efficacy and counteracts habituation effects. This invention is similar to the solely vibrotactile stimulation device in 23-357 (see related Technologies links below) except with a new contactor for hybrid stimulation which contains dedicated electrodes.

Stage of Development

Prototype

Related Technologies:

17-270: [Safe and efficient vibrotactile multi-channel stimulation for the treatment of brain disorders](#)

23-357: [Apparatus for efficient vibrotactile stimulation, especially vibrotactile fingertip stimulation](#)

23-359: [Apparatus for efficient vibrotactile and electrotactile fingertip stimulation](#)

23-360: [Apparatus and method for efficient long-term multi-channel non-invasive stimulation for the treatment of disorders of the nervous system](#)

23-373: [Apparatus and method for efficient multichannel vibrotactile stimulation with compound pulses](#)

23-407: [Apparatus for efficient electrotactile fingertip stimulation for the treatment of disorders of the nervous system](#)

23-408: [Apparatus and method for efficient wireless synchronization of multi-site non-invasive stimulation for the treatment of disorders of the nervous system](#)

23-409: [Method and apparatus for autonomous parameter adaptation of non-invasive multichannel stimulation](#)

Applications

- Glove (fingertip stimulation) for the therapy of Parkinson's Disease and other movement related disorders

Advantages

- Non-invasive
- Easy implementation with current prototype
- More effective stimulation with added benefits of hybrid stimulation (vibrotactile and electrotactile)

Innovators

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