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Paper Title:	A Steady-State Somatosensory Evoked Potential-based Brain-Computer Interface using a Vibrotactile Stimulus by Mixing Vibration Frequencies
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Abstract

In the case of paralysis with visual and auditory impairments, brain-computer interfaces (BCIs) based on tactile stimulus paradigms provide alternative methods for controlling external devices. This study demonstrates the use of a BCI system via steady-state tactile stimulation for assistive technology and rehabilitation. We designed a steady-state tactile stimulator using a vibrotactile motor with two fundamental and mixing vibration frequency patterns. The vibrotactile stimulators were attached to the wrist. We recorded EEG signals and observed a response. We also verified the classification algorithm. The results revealed that the average classification accuracy ranged from 73.33 to 81.67%. We further implemented a real-time BCI for control and rehabilitation applications.