Washington University in St. Louis
Office of Technology Management

METHOD TO REMOVE BRAIN STIMULATION ARTIFACTS IN NEURAL SIGNALS

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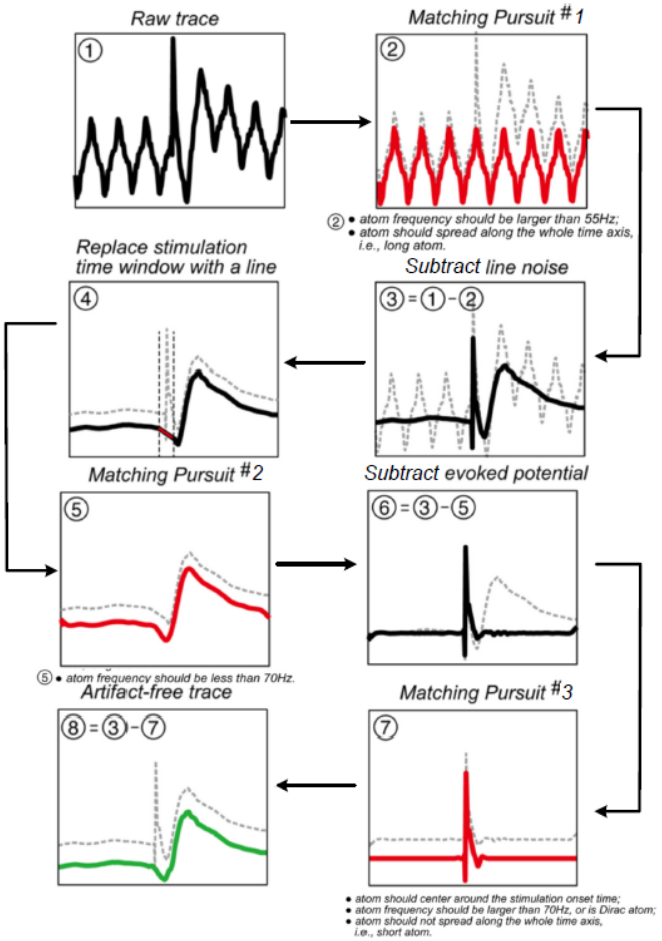
Value proposition: *Method and system for removing multiple types of brain stimulation artifacts in neural signals to improve neurological diagnoses and therapies.*

Technology Description

Researchers at Washington University in St. Louis have developed a method to remove brain stimulation artifacts from neural signals without needing additional information from previous stimulation pulses and other electrodes. Filtering, Interpolation, and template subtraction methods have been previously used to remove stimulation artifacts, but all suffer from some limitations. Thus, there remains a need for novel unsupervised methods of accurately estimating and removing stimulation artifacts.

This method uses the matching pursuit to accurately extract artifacts associated with brain stimulation and can be used in closed-loop systems for neurological diagnoses and therapies.



Applications

- Neural stimulation monitoring for diagnosis and therapeutics

Key Advantages

- Removes brain stimulation artifacts
- Does not require additional information from previous stimulation pulses or other electrodes

Patents: Patent application filed

Related Web Links: Brunner Profile & Lab; Leuthardt Profile & Lab