

Motor Task Detection Using Brain Subthalamic Nucleus Local Field Potentials

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Summary: An asynchronous behavior detection method to support closed-loop DBS systems

Description: Current deep brain stimulation (DBS) devices are open-loop, meaning that the stimulation signal parameters are adjusted by a clinician and fixed for each patient until the next visit. A closed-loop DBS system, which requires the ability to detect asynchronous behavior in real time, can optimize the therapy by modulating the parameters based on the patient behavior. This invention introduces an asynchronous behavior detection method that uses subthalamic nucleus (STN) local field potential (LFP) data, able to detect event and non-event timings.

Advantages of this Invention:

- Can be used to design closed-loop DBS devices, which will provide therapeutic effects while adapting to patient conditions, reducing battery usage and eliminating side effects associated with open-loop devices

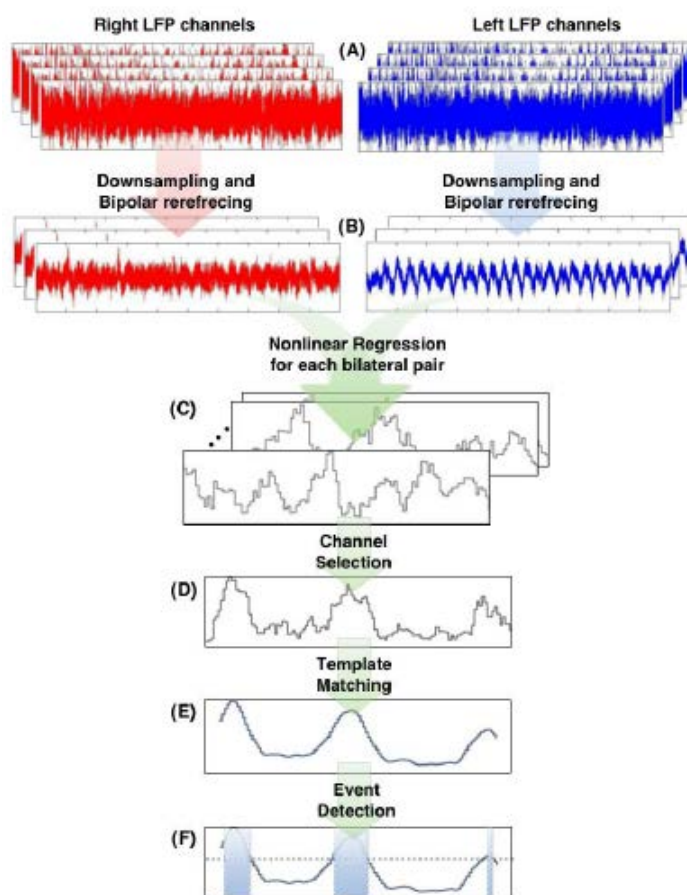
Potential Areas of Application:

- Biomedical

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Intellectual Property Status: Provisional application filed, #62/263,173

Opportunity: We are seeking an investor or strategic partner to license this invention.



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