Gulf Coast Consortia for Quantitative Biomedical Sciences

Keck Seminar

Friday, September 14, 4pm

BRC Auditorium

6500 Main, Corner of University & Main

Generalized Brain-Machine-Interfacing for Neuromodulation

by

Tim Denison, Ph.D.

Director of Neuroengineering

Medtronic

Abstract:

Modulating neural activity through stimulation is an effective treatment for several neurological diseases, such as Parkinson's disease and essential tremor, and is being explored for several other indications. Opportunities for improving modulation of neural activity include reducing the burden of optimizing stimulation parameters, objectively measuring efficacy over time, and continuously adjusting therapy to optimize patient outcomes. Achieving these goals is challenged by practical issues, including the paucity of human data related to disease states, poorly validated patient state estimators, and evolving nonlinear mappings between estimated patient state and optimal stimulation parameters. The application of brain-machine-interface (BMI) technology to existing stimulator architectures could help address these issues, and potentially enable smarter future "prosthesis" systems for neural circuits impacted by disease.

A collaboration of:

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