



AALBORG UNIVERSITY
DENMARK

Invited Lecture by Dr. Benjamin Metcalfe, PhD
University of Bath, UK

Time: Tuesday 13 November 2018 at 13:00

Place: Aalborg University, Fredrik Bajers Vej 7D2, room No. D2-106

Neural Recording in Peripheral Nerves

Abstract

The idea of recording and understanding the electrical signals that travel throughout our bodies is not a new one. In the two-hundred odd years since Galvani there are still only a handful of commercially available devices that interface directly to the peripheral nervous system. The challenges are multiple - technological, surgical, and regulatory. Electrical modulation of the peripheral nerves has a long-documented history of success, however this stimulation can have only a limited efficacy if it is not used in tandem with a recording of the physiological signals – the loop needs to be closed.

There are multiple approaches to neural recording that are currently being explored; the most attractive techniques are those that might be chronically implanted and cause only minimal damage to the nerves. As yet, no single approach has seen widespread adoption. This seminar will discuss the state of the art, comparing the leading methods for recording, processing, and ultimately decoding the information within the peripheral nerves. The broader challenges will be discussed and some future directions presented.

All interested are welcome!

Yours sincerely

Associate Prof. Thomas Nørgaard Nielsen, PhD

Neural Engineering and Neurophysiology