



# Building a Bionic Nervous System



Presented by:  
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## **Abstract:**

Using implanted devices that send pulses of electricity through the nervous system, physicians are learning how to influence the neural systems that control people's bodies and minds. These devices give neurologists new ways to treat patients with a wide range of disorders, including epilepsy, chronic pain, depression, and Parkinson's disease.

In this presentation we'll describe three "closed-loop" systems that respond to the flux of biology within the body.

The three Created devices by Tim Denison at the medical device company Medtronic, Felice Sun at NeuroPace, and Milton Morris at Cyberonics that take advantage of developments in low-power implantable sensors and embedded signal processing.

**Date:**

15 April 2015

**Time:**

10:30 AM

**Location:**

Integrated Circuits and  
Systems Research Lab  
Faculty of Electrical  
Engineering