



# JOHNS HOPKINS

## BIOMEDICAL ENGINEERING



**Monday October 20, 1:00PM, Ross G007**

Light lunch will be provided at noon



## **Neuroprosthetic Design for Restoring Motor Function after Spinal Cord Injury**

**Justin C. Sanchez, Ph.D.**

Assistant Professor

Director, Neuroprosthetic Research Group

McKnight Brain Institute

University of Florida, Gainesville

Host: Dr. Nitish Thakor

### Abstract:

Closed-loop neural interfaces are one of the most exciting emerging technologies to impact biomedical research, human health, and rehabilitation. This talk will present new experimental designs and decoding methodologies for brain-machine interface (BMI) systems in humans (ECoG) and animals (microelectrode arrays). Included are techniques for neurophysiologic feature detection and methods for determining representation in multiscale signals for deriving motor control. A new framework for continuous decoding based on reinforcement learning (RL) will be presented and it will be shown how principles of neural control can be studied through co-adaptive interaction between the user and the neural interface

### **Upcoming seminars:**

October 27: Dr. Atam Dhawan, New Jersey Institute of Technology

October 29: Dr. Mark Pettinger

visit: <http://www.bme.jhu.edu>

**For more information call 410-516-7903**