NJIT

# Department of Biomedical Engineering

*Graduate Seminar*

**March 4th (Friday)**
**11:30 a.m.**
**WebEx (Click here)**


***Dr. George McConnell, PhD.***
Assistant Professor
Department of
Biomedical Engineering
**Stevens Institute of Technology**


## Insights from Neural Activity Patterns During Deep Brain Stimulation


***Abstract***

Deep Brain Stimulation (DBS, a brain pacemaker) effectively treats many of the motor symptoms of Parkinson's disease (PD), however, the exact mechanisms of DBS are unknown. An accurate understanding of the mechanisms of DBS is necessary to realize the full potential of this promising technology. In this talk, I will cover prior and ongoing research studies in my lab using neural recordings in rat models of PD to advance our understanding of how DBS works, and accelerate the discovery of more efficient and effective stimulation strategies. I will discuss the development of a technique to increase the accuracy and precision of DBS lead placement for Parkinson's with exciting applications for other neurological and neuropsychiatric diseases.


***About the Speaker***

Prof. McConnell is an Assistant Professor in the Department of Biomedical Engineering at the Stevens Institute of Technology, where he has been since 2015. From 2009 to 2015, he was a research scientist in the Department of Biomedical Engineering at Duke University. Prof. McConnell earned a PhD degree (2008) in Bioengineering from Georgia Institute of Technology, and before that received Master's and Bachelor's degrees in Biomedical Engineering from Drexel University. His research program focuses on neuromodulation, movement disorders, and neural engineering, with support from the National Institutes of Health (NINDS), the Brain & Behavior Research Foundation, and the Branfman Family Foundation.