1135-AH-340 **Sam Behseta*** (sbehseta@fullerton.edu), 800 N. State College Blvd., Department of Mathematics, California State University, Fullerton, Fullerton, CA 92832. *Bayesian Modeling of Neuronal Spike Trains.*

In this talk, I will give an overview of some of the work that I have been involved with in the past few years, including a series of collaborative efforts utilizing Bayesian hierarchical models for the analysis of point processes associated with the neuronal spike train data, I will talk about Bayesian Functional Data Analysis for the comparative analysis of neuronal spiking activities recorded under multiple experimental conditions and Bayesian nonparametric techniques utilizing Dirichlet Processes for the same objective. Additionally, I will explain the advantages of applying a Bayesian framework through Gaussian Process models for decoding information associated with multiple spike trains obtained from simultaneously recorded neurons. Finally, I will offer a few thoughts about some exciting opportunities for future research. (Received August 25, 2017)