

DEPARTMENT OF STATISTICS AND BIOSTATISTICS

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*A Geometric Approach to Confidence Regions
and Bands for Functional Parameters*

September 21, 2016

3:20 – 4:20pm

Light refreshments will be served

110 Frelinghuysen Road

Hill Center, Room 552

Abstract: Functional data analysis, FDA, is now a well established discipline of statistics, with its core concepts and perspectives in place. Despite this, there are still fundamental statistical questions which have received relatively little attention. One of these is the systematic development of techniques for constructing confidence regions for functional parameters. I will present new work that takes a geometric approach to developing, understanding, and visualizing such regions. Simulations and an application to Fractional Anisotropy will also be presented.

Bio: I graduated from the University of Chicago in 2012 with a PhD in Statistics; my advisor was Dan Nicolae. I have been an Assistant Professor at Penn State since graduating (this is the beginning of my fourth year). My research is mainly on functional data analysis, commonly with focus on applications to genetic epidemiology.

