

THE DEPARTMENT OF MATHEMATICAL SCIENCES

Purdue University Fort Wayne

is pleased to present

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**Analysis of Survey Data:  
Novel Strategy Via Dimension Reduction**

**Abstract**

In the era of *big data*, researchers interested in developing statistical models are challenged with how to achieve parsimony. Usually, some sort of dimension reduction strategy is employed. Classic strategies are often in the form of traditional inference procedures, such as hypothesis testing; however, the increase in computing capabilities has led to the development of more sophisticated methods. In particular, *sufficient dimension reduction* has emerged as an area of broad and current interest. While these types of dimension reduction strategies have been employed for numerous data problems, they are scantily discussed in the context of analyzing survey data. This talk provides an introduction of some classic and modern dimension reduction methods, followed by a discussion of how to use the transformed variables in the context of analyzing survey data. We highlight some of these methods with an analysis of health insurance coverage using the US Census Bureau's 2015 Planning Database.

Noon – 1:00, Monday, Nov. 19, 2018. Location: Kettler 220

<http://www.pfw.edu/departments/coas/depts/math/news/seminars.html>