

### THE UNIVERSITY OF GEORGIA DEPARTMENT OF STATISTICS

# Colloquium Series

## Dr. William Myers Proctor & Gamble

Thursday, April 5, 2018

3:30pm in room 102, Caldwell Hall

#### A Sequential Maximum Projection Design Framework for Computer **Experiments with Inert Factors**

Many companies use computer simulations in place of physical experiments to speed the development of new products and processes. The physical creation and testing of prototypes can be very prohibitive in terms of time and cost. Computer simulations can often be complex and take hours to complete one run. Computer experiments, which are used to study computer simulations, often involve large numbers of input factors, but some of them are inert. This talk will discuss a new sequential design framework that can accommodate multiple responses and quickly screen out inert factors so that the final design is space-filling with respect to the active factors. By folding over Latin hypercube designs with sliced structure, this sequential design can have flexible sample size in each stage and also ensure that each stage, as well as the whole combined design, are all approximately Latin hypercube designs. The sequential framework does not require prescribing the total sample size and, under the presence of inert factors, can lead to substantial savings in simulation resources. Even if all factors are important, the proposed sequential design can still achieve a similar overall space-filling property compared to a maximin Latin hypercube design optimized in a single stage.

#### What Is It Like to Be a Statistician in Industry: A P&G Perspective **Lunch Discussion**

#### 12:00pm Cohen Room, 434 Brooks Hall

This presentation will discuss what it's like to be statistician (or data scientist or similar role) in industry. First, will be a brief history of Procter & Gamble and the current statistics organization at P&G. Then I will share the various job opportunities that are available for new grads and the types of skills that employers want. Finally, I will discuss the types of technical challenges that statisticians at Procter & Gamble encounter. We will be sure to allow plenty of time for questions and discussion.