

## UGA DEPT OF STATISTICS AND GEORGIA CHAPTER OF ASA



Colloquium

## Michael Hamada

Statistical Sciences Group
Los Alamos National Laboratory

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## Blowing Bubbles, Collecting Rain and Making Propellers Experiencing the Practice of Statistics by Trying Simple Experiments

In working with scientists and engineers to solve their problems, an applied statistician develops a statistical framework for their problems and their solutions often involve analyzing data and developing data collection schemes. Issues invariably arise which must be dealt with and can lead to new results, i.e., applied statistical research. In analyzing data, these issues can sometimes be addressed in the statistical models that are developed. Simulation can be helpful in evaluating a proposed procedure. Moreover, simulation coupled with an optimization algorithm can be used to develop a data collection scheme. I will illustrate these points with some simple experiments motivated by my Dad and two daughters (and a summer intern). It turns out that conducting a simple experiment is not so simple and almost immediately one is faced with the practice of statistics.