



# C R Rao Advanced Institute for Mathematics, Statistics & Computer Science (AIMSCS)

University of Hyderabad Campus, Gachibowli  
Prof. C R Rao Road, Hyderabad, India 500 046  
Website: <http://crraoaimscs.org>

## Seminar on **Optimality of Reduced Size Choice Sets** By **Pallavi Chitturi, PhD** **Temple University, Philadelphia**

### **Abstract:**

Choice-based conjoint experiments are used when choice alternatives can be described in terms of attributes. The objective is to infer the value that respondents attach to attribute levels. This method involves the design of profiles on the basis of attributes specified at certain levels. Respondents are presented sets of profiles and asked to select the one they consider best. When the number of attributes or attribute levels becomes large, the profiles in a single choice set may be too numerous for respondents to make precise decisions. Designs where two-way and higher order interactions are estimated are particularly prone to requiring many profiles. The number of profiles may be reduced if it is only required that a subset of interactions be estimable. Several strategies have been proposed for reducing the number of profiles and the sizes of choice sets such as sub-setting choice sets, sub-setting levels, and sub-setting attributes. However, the optimality of these reduced size choice sets has not been examined in the literature. In this talk we examine the optimality of reduced size choice sets using information per profile (IPP) as the optimality criteria. We propose a new approach for obtaining the IPP of designs obtained by sub-setting attributes.



### **Brief Bio Sketch**

Pallavi Chitturi is an Associate Professor at the Department of Statistics, Temple University, and Director of the Center for Statistical Analysis. She teaches undergraduate and graduate level statistics courses and for the Executive MBA program in Philadelphia and Cali, Colombia. Dr. Chitturi's research interests are in the areas of design of experiments, conjoint analysis, and discrete choice experiments. Dr. Chitturi has made several research presentations at conferences such as the Joint Statistical Meetings and the Conference of Texas Statisticians, and has published articles in statistics and marketing journals. Dr. Chitturi has successfully supervised Ph.D. dissertations and recently published a book titled 'Choice Based Conjoint Analysis – Models and Designs'.

**Date : 21 July 2014, 03:30 PM**

**Venue: Classroom-1, First Floor, Ramanujan Building, C R Rao AIMSCS**