

lights at other drivers, slowing down in front of drivers who are tailgating, and cutting off other drivers). Most participants reported engaging in more passive behaviors, such as shaking their heads at other drivers.

Statistics

FINDING AN OPTIMAL DESIGN USING PSEUDOFACORS. Mary A. Marion, Department of Statistics, Virginia Polytechnic Institute and State University. This paper was written as a result of an Industrial Systems Engineering project performed at Virginia Tech. This paper reflects an evolving procedure to design an industrial experiment utilizing optimality criteria, AIC statistic and the usual regression/ANOVA model statistics. Discrete factor settings were coded as continuous to utilize response surface methods to find the best settings to reach a specified target. While the industrial example is trivial the characteristics of the project lend themselves to illustrate the complexity of real life applications.

AN INCREMENTAL FORWARD STAGewise REGRESSION ALGORITHM FOR DICHOTOMOUS RESPONSE VARIABLES. Adam Sima, Department of Biostatistics, Virginia Commonwealth University. The Incremental Forward Stagewise Regression (IFSR) procedure was developed by Hastie, et al. (2001) as a flexible estimation procedure for fitting penalized linear models. To generalize this procedure, the IFSR estimation method was extended for use with a dichotomous response variable. In particular, a simulation study was used compare both the accuracy in prediction and model fit to similar algorithms that simultaneously fit a model and estimate parameters. The results show that this method is comparable to some commonly used algorithms.

INTRODUCTION TO DISCRETE CHOICE MODELS. Bhaskara S. Ravi and N. Rao Chaganty, Department of Mathematics and Statistics, Old Dominion University. We often encounter with decisions that involve choosing between alternatives or choices such as “which phone to buy” or “which minute plan” to choose or “which brand of shampoo to buy” etc. Interestingly, these decisions not only depend on individual characteristics but heavily on alternatives available. Discrete choice models analyze such choice behavior and these are very popular in economics. This talk aims at introducing very famous McFadden’s conditional logit model and the importance of IIA (Independence of irrelevant attributes) assumption. Also, a review of current trends and challenges in this popular research area are presented.

Structural Biology, Biochemistry and Biophysics

MECHANISM OF ACTION OF UDP-GALACTOPYRANOSE MUTASE FROM TRYPANOSOMA CRUZI. Michelle Oppenheimer, Ana L. Valenciano, Jun Qi, & Pablo Sobrado, Department of Biochemistry, Virginia Tech, Blacksburg, VA 24061. *Trypanosoma cruzi* (*T. cruzi*) is the causative agent of Chagas’ disease, which if untreated leads to chronic inflammation of the heart. UDP-galactopyranose