

**Seminars on Statistics in Marketing and Psychology, Spring 2005**

**Fridays, 2.30–.350pm in CH212** (except April 8th will be in Fisher 500)

April 8: Qing Liu, Statistics **in Fisher 500**

Discussion of “Heirarchical Bayes conjoint analysis: recovery of partworth heterogeneity from reduced experimental designs”

by P.J. Lenk, W.S. DeSarbo, P.E. Green and M.R. Young, *Marketing Science*, 1996, 15,173–191.

April 15: Greg Allenby, Marketing **in CH 212**

Analysis in Marketing — foundations and future Part I. What is the “discipline” of Marketing?

April 21 (in EA170) Ninth Annual Robert Wherry Lecture

George Karabatsos, University of Illinois at Chicago

Bayesian nonparametric model selection and model testing

(Jointly organized by Departments of Psychology and Statistics)

April 22: Two talks:

2.30–3.10 Crystal Dong, Statistics

Discussion of “Bayesian Experimental Design: A Review”, by Kathryn Chaloner and Isabella Verdinelli, (1995), *Statistical Science*, 10, 273-304.

3.10–3.50 Ed Merkle, Psychology

A ”quick and dirty” missing data method for Bayesian analysis.

(Abstract below)

April 29: Greg Allenby, Marketing

Analysis in Marketing — foundations and future Part II. How do you define a “market”?; how do you “segment” your market?; how do you do “positioning”?

May 6: Yan Xu, Statistics

Discussion of “Differentiated Bayeisan conjoint choice designs”

by Z. Sandor and M. Wedel

May 13: Mario Peruggia, Statistics  
Discussion of “A Bayesian  $\chi^2$  test for goodness of fit” *Annals of Statistics*, 34,  
2361-2384, by Valen Johnson  
Discussion of “Bayes factors based on test statistics”, by Valen Johnson

May 20: Rebecca White, Psychology  
Purchasing behavior using gift cards.

May 27: Greg Allenby, Marketing  
Students’ creative solutions to problems posed on April 29th

Jun 3: no seminar

## ABSTRACTS

April 22nd: Ed Merkle, Psychology  
A “quick and dirty” missing data method for Bayesian analysis.

Missing data are a problem for most methods of model estimation. Special assumptions and probability models are often required to handle missing data, resulting in model estimation techniques that can substantially differ from the original model estimation techniques. Thus, a disproportionate amount of time can be invested in modifying a complete-data estimation technique for the handling of incomplete data.

As an alternative to specifically incorporating missing data into a given model estimation algorithm, I will outline a general method that allows for easy incorporation of missing data into many Bayesian estimation algorithms. In a similar manner to multiple imputation, this method assumes that the data arise from a saturated multivariate normal model. At each iteration, predictions for the missing data points are simulated, after which parameters from the model of interest are simulated. Details of the algorithm and a data example will be presented.