

MINI-SEMINAR FOR FIRST-YEAR PH.D. STUDENTS

Department of Statistics

**A Random Field Approach to the Analysis
of Field-Plot Experiments and Other Spatial Experiments**

by

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ABSTRACT

The reference paper is "A Random Field Approach to the Analysis of Field-Plot Experiments and Other Spatial Experiments" by Dale L. Zimmerman and David A. Harville. It was published in Biometrics on March, 1991. Several "nearest-neighbor" methods for the analysis of data from spatial experiments have recently been proposed. However, "the Random Field Approach" is very different way in the aspect that the spatial heterogeneity is modeled directly. The Random Field Approach will be introduced and compared with other methods by uniformity trial data. A randomization study of uniformity trial data suggests that the random field approach often provides more accurate estimates of treatment contrasts than other approaches.