ON RECURRENCE RELATIONS FOR ORDER STATISTICS

H. A. David
Department of Statistics
Iowa State University
Ames, IA 50011

ABSTRACT

The main purpose of this paper is to provide a unified approach to the treatment of linear recurrence relations for single or pairs of order statistics. Suppose such a relation has been proved in the simplest case when $X_1,\ldots,X_n$ are independent variates having an arbitrary absolutely continuous distribution. It is pointed out that the same relation continues to hold when the X's are exchangeable, whether continuous or not. As has recently become well known, further generalizations are possible when the X's have any joint distribution. Attention is also drawn to a useful nonlinear recurrence relation due to Boncelet (1987).

Keywords: Linear recurrence relations, exchangeable variates