

A circular logo with a yellow background and a red border. Inside the circle, the number '34' is written in a large, green, stylized font. The '4' has a red square in its center. To the right of the '4', the word 'th' is written in a smaller, green, sans-serif font.

**34th ANNUAL
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of the
Nigerian
Mathematical
Society (NMS)**

***Theme:* MATHEMATICS FOR
SUSTAINABLE DEMOCRACY AND
NATIONAL DEVELOPMENT**

Host:
Department of Mathematics,
University of Lagos.

D50: ANALYSIS OF AUTOCORRELATED DATA

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Abstract: Repeated measures analysis is widely used tool of applied statistician. However, its users are confronted with what seems to be a myriad of decisions, even in its simple application due to the serial auto correlation of repeated measures data. Milk production of four different cattle groups at Maizube Farms Ltd, Minna, Nigeria were analyzed using individual curves fitting, trend analysis and one way analysis of variance which showed serial auto-correlation of the repeated measures data with time. In order to remove serial autocorrelation of measures with respect to time, satisfactory approaches such as General linear model, profile plot and two-stage linear model were used and the result obtained showed remarkable improvement over the former descriptive approach.

D51: IMPROVING CHIU'S MODEL FOR THE FIXED LIFE TIME INVENTORY SYSTEM WITH POSITIVE LEADTIME.

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Abstract: The fixed lifetime inventory system (with zero or positive leadtime) has being considered by various authors, with the aim of reducing the quantity of outdated in the inventory system. Chiu (1995), considered the positive leadtime case by approximating the expected shortage quantity, the expected outdate quantity and the expected on hand inventory. He obtained an inventory model with the ordered quantity as Q and the reorder point as r respectively. In this work, we examine Chiu's implementation of the model, redefine (the derivative of the total cost function) and implement the redefined model, compare our results with Chiu's result. Also, the author considered the case where the reorder point is not zero, which Chiu did not consider.