Construction of Neighbor Designs in Binary Blocks of Some Large Sizes

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[Received on August, 2013. Revised on January, 2018]

ABSTRACT

Neighbor designs are useful to neutralize the neighbor effects. These designs are available in literature for several configurations especially for circular blocks of sizes 3, 4, ... , 10. In this paper, first order neighbor balanced designs are constructed for circular binary blocks of size 11, 12, 13 and 14.
Entropy for Concomitants of k-Record Values in Morgenstern Family of Distributions

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[Received on November, 2014. Revised on November, 2017]

ABSTRACT

In this paper, we obtain the expression for Shannon entropy of concomitants of k-record values arising from Morgenstern family of distributions. Based on this expression we derive the entropy of certain distributions belonging to Morgenstern family of distributions. Some properties for entropy of concomitants of k-record values arising from Morgenstern family of distributions are also discussed.

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An Alternative Method of Construction of Optima Row Column Designs for Complete Diallel Crosses

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[Received on November, 2015. Revised on February, 2018]

ABSTRACT

A simple method of construction of pair of orthogonal latin squares of order \( p (= m t + l) \), where \( p \) be a prime integer, \( m \) be a prime integer or power of a prime integer, and \( t > 1 \) is an integer, respectively, is proposed. By using these pair of orthogonal latin squares, the four series of row-column designs for complete diallel crosses for \( p > 3 \) lines, are obtained. Our series 2 and 3 row-column designs are different from Gupta and Choi (1998) and Parsad et.al (2005) series 2 and 3 designs while series 1 and 4 designs are similar to their designs. Gupta and Choi (1998) and Parsad et.al (2005) constructed the four series of row-column designs for complete diallel crosses for \( p > 3 \) lines, by using nested balanced incomplete block designs. Our method is easy in comparison to Gupta and Choi (1998) and Parsad et.al (2005) methods, respectively.

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Generalized Maximum Likelihood Estimators for Gamma Distribution: Semi-Bayesian Approach

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[Received on March, 2017. Revised on March, 2018]

ABSTRACT

Generalized maximum likelihood estimators are obtained for the parameters of gamma distribution and for some inequality measures \textit{viz.} Gini index and Theil’s entropy measure using different priors. The said estimators using different priors are compared in terms of their relative efficiency using mean square error through simulation study.

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Some Inferences on the Skew Semi Circular Distribution

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[Received on December, 2017. Revised on March, 2018]

ABSTRACT

Skewed distributions have received a great deal of attractions in literature, because some data display some degrees of skewness. Several distributional properties of the skew semi-circular distribution are presented. Some characterizations based on the truncated moments are given.

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Establishing the Link between Fiscal Indicators in India: A VAR Analysis (1980-2013)

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[Received on January, 2018. Revised on March, 2018]

ABSTRACT

In this paper, the relationship between the three major fiscal indicators: central government revenues, development expenditure of the Central government and real GDP in India has been established for the period 1980-2013. The vector autoregressive model is used for studying the relationship and the direction of causality between the variables determined using the Granger causality test. Granger causality test shows that there is causality running from growth of central government revenue to growth of central government development expenditure supporting the tax spend hypothesis. Also, GDP growth is granger causing the growth of revenues of the central government but the causality in the reverse direction is not true.

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