

Accepted Manuscript

Inference for the Burr XII reliability under progressive censoring with random removals

Sumith Gunasekera

PII: S0378-4754(17)30284-7

DOI: <http://dx.doi.org/10.1016/j.matcom.2017.07.011>

Reference: MATCOM 4486

To appear in: *Mathematics and Computers in Simulation*

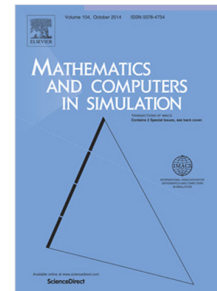
Received date: 21 December 2015

Revised date: 13 December 2016

Accepted date: 31 July 2017

Please cite this article as: S. Gunasekera, Inference for the Burr XII reliability under progressive censoring with random removals, *Math. Comput. Simulation* (2017), <http://dx.doi.org/10.1016/j.matcom.2017.07.011>

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.



Inference for the Burr XII Reliability under Progressive Censoring with Random Removals

Sumith Gunasekera

Department of Mathematics

The University of Tennessee at Chattanooga

Chattanooga, TN 37403

USA

December 13, 2016

Abstract

The inference about the reliability function of Burr XII distribution using the concept of generalized variable method based on progressively type II censoring with random removals, where the number of units removed at each failure time has a discrete uniform distribution, is proposed. As assessed by simulation, the coverage probabilities of the proposed approach are found to be very close to the nominal level even for small samples. The proposed new approaches are computationally simple and are easy to use. The method is illustrated using two examples.

Key words: Burr XII distribution, Generalized variable method, Progressively type II censored sample, Uniformly distributed random removals, Reliability function

1 Introduction

In this study, we consider the case of progressively type II right censoring scheme with uniformly distributed random removals. In the presence of these progressively type II censored data, reliability analysis is utilized to assess the lifetime data under the Burr XII distribution (or simply

Download English Version:

<https://daneshyari.com/en/article/7543354>

Download Persian Version:

<https://daneshyari.com/article/7543354>

[Daneshyari.com](https://daneshyari.com)