An Extended Inverse Pareto Distribution, with Applications

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Abstract : This paper introduces a new extension of the Inverse Pareto distribution in the framework of Marshal-Olkin (1997) family of distributions. This model is capable of modeling various shapes of aging and failure data. The statistical properties of the new model are discussed. Several methods are used to estimate the parameters involved. Explicit expressions are derived for different types of moments of value in reliability analysis are obtained. Besides, the order statistics of samples from the new proposed model have been studied. Finally, the usefulness of the new model for modeling reliability data is illustrated using two real data sets with simulation study.