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Characteristic Function in Estimation of Probability Distribution Moments

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Abstract : In this article the problem of distributional moments estimation is considered. The new approach of moments estimation based on usage of the characteristic function is proposed. By statistical simulation technique, author shows that new approach has some robust properties. For calculation of the derivatives of characteristic function there is used numerical differentiation. Obtained results confirmed that author's idea has a certain working efficiency and it can be recommended for any statistical applications.

Keywords : characteristic function, distributional moments, robustness, outlier, statistical estimation problem, statistical simulation

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