Distributions of Entropies from Nakagami Distribution Sample

By

Afaf Mohammad Ismail Al Sous

Supervisor

Dr. Ma'mon Abu Hammad

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Abstract

This thesis calculates the exact quantiles of the MLE of Shannon entropy of the Nakagami distribution's and approximate quantiles of the asymptotic distribution of this statistic. In addition, the thesis proposes a new version of that statistic and shows that, even for small samples, through the quantiles of the chi-square distribution, it offers formula for quantiles of the precise distribution of statistic and derives some characteristics from the MLE Shannon entropy of the Nakagami distribution's.

Keywords: Asymptotic normality, Fisher information, MLE, Nakagami distribution, Shannon entropy.