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Derived Uncertainty Measures for Entropy Transformed Ailamujia Distribution

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- (1) Entropy measure
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- (3) Information theory

Abstract

In this paper, the derivation of eight different entropies and their respective cumulative residuals for measuring uncertainty, randomness, complexity, unproductive energy, etc., in information theory, statistical mechanics, topological dynamics, biomedical and engineering systems, communication theory, etc., are derived for a modified Ailamujia distribution called Entropy Transformed Ailamujia Distribution (ETAD) introduced by [1]. The eight derived ETAD entropies and Cumulative Residual (CR) entropies are Renyi, Tallis Entropy (TE), Arimoto Entropy (AE), Havrda-Charvat Entropy (HCE), Omega Entropy (OE), Kapur Entropy (KE), Mathai-Houbold Entropy (MHE), and Verma Entropy (VE), and CRTE, CRTE, CRAE, CRHCE, CROE, CRKE, CRMHE, and CRVE, respectively.

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