

Characterization of Probability Distributions Through Conditional Expectation of Record Values

R. U. Khan and Haseeb Athar[†]

Department of Statistics and Operations Research, Aligarh Muslim University, Aligarh-202 002, India.

Abstract

Continuous distributions of the form $\bar{F}(x) = [ax + b]^c$ and $-\ln \bar{F}(x) = [ax + b]^c$ are characterized through conditional expectation of non-adjacent upper record values and various examples are considered to elaborate the results.

Keywords: Record values, conditional expectation, characterization, Weibull, negative Frechet and negative Gumbel distributions.

2010 Mathematics Subject Classification: 62E15, 62E10, 62G30.

[†]Corresponding author e-mail address: haseebathar@hotmail.com