# Stochastic Models For Global Optimization Using Newton's Method

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## Abstract :

This paper will discuss the randomness and normality tests of the data collected by splitting the interval [a,b] into several subintervals [xi,xi+1] (i = 0, ..., n-1) with x0 = a and xn = b for verifying that the optimization problem constitutes a Wiener process. Furthermore, the data can be used to evaluate the efficiency of probabilistic algorithm as proposed in this paper in determining the best subinterval to be explored by Newton's method for searching the optimal point of global optimization problem.

Keywords: Optimization, Wiener Process, Probabilistic, Newton's Method