Abstract

Monte Carlo method is used in this paper to test the software reliability. The Monte Carlo method is a technique that can be used to solve mathematical or statistical problems. Monte Carlo simulation uses frequent sampling to determine the properties of some phenomenon. There have been very rare uses of such simulation methods for software testing. This paper provides an accurate algorithm for testing software based on Monte Carlo Methods. The results would decide the percentage reliability of the software. This scheme has a number of applications in financial analysis, Econometric, statistics, software testing, fault detection in circuits and many more.

References

- Paul Coddington. "Monte Carlo Simulation for Statistical Physics." Northeast Parallel Architectures Center at Syracuse University
- Bo Zhou, Hiroyuki Okamura and Tadashi Dohi "Markov Chain Monte Carlo"
Random Testing; Software Reliability. Hoang Pham.


- Stefan Pauli, Peter Arbenza, Christoph Schwab "Intrinsic Fault Tolerance of Multi Level Monte Carlo Methods"; Journal of Parallel and Distributed Computing.


**Index Terms**

Computer Science

Software Engineering

**Keywords**

Monte Carlo method  Software testing  Document characterization