

亂數產生器之經驗測試方法及其軟體發展

The Empirical Tests and Their Software Development for Random Number Generators

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摘要：本研究針對亂數產生器所產生之亂數數列做經驗測試方法討論，測試方法共有連檢定、相關檢定、卡方檢定、KS檢定及序列檢定等5種方法。除了探討測試方法之理論與應用之外，並發展測試方法的軟體，以供測試亂數數列之用。

關鍵詞：亂數產生器、亂數數列、經驗測試、軟體發展

Abstract: The purpose of this research is to discuss the empirical tests for the sequence of random number (RN) from the RN generators. There are five methods: runs test, autocorrelation test, chi-square test, Kolmogorov-Smirnov test and serial test. We are not only reviewing the theory and applications of the test methods, but also developing the software for the test methods.

Key words: random number generator, sequence of random number, empirical test, software development