

A Very Efficient Pseudo-Random Number Generator Based On Chaotic Maps and S-Box Tables

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Abstract : Generating random numbers are mainly used to create secret keys or random sequences. It can be carried out by various techniques. In this paper we present a very simple and efficient pseudo-random number generator (PRNG) based on chaotic maps and S-Box tables. This technique adopted two main operations one to generate chaotic values using two logistic maps and the second to transform them into binary words using random S-Box tables. The simulation analysis indicates that our PRNG possessing excellent statistical and cryptographic properties.

Keywords : Random Numbers, Chaotic map, S-box, cryptography, statistical tests

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