

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

**Authors :** M. Hamdi, R. Rhouma, S. Belghith

**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

**Conference Title :** ICICE 2015 : International Conference on Information and Communication Engineering

**Conference Location :** Istanbul, Turkey

**Conference Dates :** January 26-27, 2015