# IMAGE ENCRYPTION USING HENON CHAOTIC MAP WITH BYTE SEQUENCE

**N. S. RAGHAVA & ASHISH KUMAR**

Department of Information Technology, Delhi Technological University, New Delhi, India

## ABSTRACT

Communication is a meaningful exchange of information between two or more entities. In this era of e-communication i.e. the transmission of non-physical data that has been encoded digitally for the purpose of storage and processing of information, the first concern is about the security of the content which is shared during communication. Security is a continuous process via which data can be secured from several active and passive attacks. Encryption technique protects the confidentiality of a message or information which is in the form of multimedia (text, image, and video).

In this paper, a new symmetric image encryption algorithm is proposed based on Henon's chaotic system with byte sequences applied with a novel approach of pixel shuffling of an image which results in an effective and efficient encryption of images. By increasing confusion and diffusion, statistical analysis and experimental analysis of key sensitivity proved that the proposed image encryption algorithm resulted in a new dimension for secure image transfer in digital transmission world.

**KEYWORDS:** Cryptography, Chaotic System, Henon Map, Confusion and Diffusion