**QISLSQb: A Quantum Image Steganography Scheme Based on Least Significant Qubit**

**ABSTRACT**

In this paper, a new quantum image steganography scheme to embed quantum secrete gray image into quantum cover image is proposed. In the proposed scheme, the quantum secret image scrambled utilizing Arnold cat map and embedding the result into quantum cover image using two least significant qubit (LSQb).The extracting process need only stego image to extract the embedded secret image. The simulation results demonstrate that the proposed scheme has good invisibility and high capacity.

***Keywords:*** Quantum steganography, Quantum image processing, LSQb, Image scrambling.