**Detection of Geometric Transformations in Copy Move Forgery of Digital Images**

**ABSTRACT**

Digital images and videos play the most important role in digital forensics. They are the prime evidences of any crime scene. Among all classes of image forgeries regionduplication is the simplest and most widely launched technique to forge an image. Region duplication is also known as copy-move forgery. In this type of forgery one part of the image is copied and then pasted into another part of the same image. In this paper we particularly deal with copy-move form of digital image forgery. The existing techniques for identifying copy-move forgery are based on exact block matching approach. However, the existing techniques detect an image forgery when the copied region(s) is/are directly moved to another location of the image, without undergoing any geometric transformation. In this paper we propose a technique to detect geometrically transformed copy-moved image regions. Specifically we aim to detect rotation, rescaling, as well as a combination of both. We use Scale Invariant Feature Transform (SIFT) for our purpose.

***Keywords-*** Block matching, Cyber security, Digital forensics, Digital image forgery, Euclidean distance, Region duplication.