# PERFORMANCE COMPARISON OF FEATURE DETECTORS IN A HYBRID COPY MOVE FORGERY DETECTION TECHNIQUE

**Abstract:** The authenticity of digital images has remained questionable ever since the technology has progressed to the extent where a plethora of freely available software can drastically change the image contents with much less effort. This offers a dedicated challenge to ascertain the veracity of a digital image, especially when it is to be presented as a legal evidence. A number of techniques have been proposed to detect image forgery, albeit their respective efficacy depends on the type of forgery and image features. Moreover, their respective performance with respect to accuracy and execution time also varies. This paper focuses on the most frequently used image forgery referred to as copy-move forgery. The work carried out in this paper is two-fold. First, a hybrid approach combining the existing block-based and non-block-based techniques of copy-move forgery has been proposed. Second, the performance of the proposed technique has been evaluated with different image features, including SIFT, SURF, MSER, MinEgen, FAST and Harris. The evaluation criteria comprising accuracy, precision, recall and execution time help to select a desired tradeoff between accuracy and execution time. The results proposed in the paper show that the proposed image forgery detection technique can successfully detect copy-move forgery with a remarkably high accuracy and reasonable execution time. Apart from this, the proposed technique also works fine with the smoothed and brightened images.