

# A Novel Palmprint Segmentation Technique

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## **Abstract**

Recent paradigm shift from the conventional contact based palmprint recognition to contactless based systems (CBS) has necessitated the development of a variety of these systems. A major challenge of these systems is its robustness to illumination variation in unconstrained environment, thus making segmentation difficult. In this paper, the acquired image undergoes color space conversion and the output is filtered using coefficients obtained from the training of an artificial neural network (ANN) based model coefficient determination technique. Performance analysis of the proposed technique shows better performance in terms of mean square error, true positive rate and accuracy when compared with two other techniques. Furthermore, it has also been observed that the proposed method is illumination invariant hence its suitability for deployment in contactless palmprint recognition systems.

**Keywords:** Transient Multiexponential, Data Selection, Cramer Rao, Lower Bound

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