Abstract

Content based image retrieval is an important research area in image processing, with a vast domain of applications like recognition systems i.e. face, finger, iris biometric etc. It retrieves the similar type of images from repository of images based on users query. To retrieve similar images, color, and texture or shape features need to be extracted from the images and stored in the feature database. The color, texture or shape features of query image are compared with the features of images in the database. This comparison is performed using color, texture or shape distance metrics. Phase Congruency is applied to the input image for feature extraction. Advantage of the Phase Congruency method is its insensitivity to variations in image illumination and contrast. Like CBIR, the methods for iris recognition mainly focus on feature representation and matching. We use phase congruency to generate iris feature vector. Phase
Congruency can be calculated using Log Gabor wavelets. The goal of this paper is to evaluate the performance of CBIR system and iris recognition that use Phase Congruency. To evaluate performance in CBIR System, precision and recall measures are used. In order to evaluate iris recognition system, recognition rate measure is used and compared with existing methods. Results of performance evaluation are discussed in paper.

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**Index Terms**

Computer Science  
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**Keywords**

Phase Congruency  
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Hamming Distance