

## Retina Registration for Biometrics Based on Characterization of Retinal Feature Points

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**Abstract :** The unique structure of the blood vessels in the retina has been used for biometric identification. The retina blood vessel pattern is a unique pattern in each individual and it is almost impossible to forge that pattern in a false individual. The retina biometrics' advantages include high distinctiveness, universality, and stability overtime of the blood vessel pattern. Once the creases have been extracted from the images, a registration stage is necessary, since the position of the retinal vessel structure could change between acquisitions due to the movements of the eye. Image registration consists of following steps: Feature detection, feature matching, transform model estimation and image resembling and transformation. In this paper, we present an algorithm of registration; it is based on the characterization of retinal feature points. For experiments, retinal images from the DRIVE database have been tested. The proposed methodology achieves good results for registration in general.

**Keywords :** fovea, optic disc, registration, retinal images

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