

Abstract—Accurate detection of optic disk and macula are of interest in automated analysis of retinal images as they are landmarks in retina and their detection aids in assessing the severity of diseases based on the locations of abnormalities relative to these landmarks. The general strategy is to design different methods to these landmarks. In contrast, we propose a novel and unified approach for Optic disk and macula detection in this paper using the Generalized Motion Pattern (GMP) [10] [19] which is derived by inducing motion to an image to smooth out unwanted information. The proposed method is unsupervised, parallelizable and handles illumination differences efficiently but assumes a fixed protocol in image acquisition. The proposed method has been tested on five public datasets and obtained results indicate comparable performance to supervised approaches for the same problem.