

This paper deals with registration of retinal images, which were taken by digital color fundus camera. It is focused mainly on registration of images which suffers from diabetic retinopathy, where many pathologies can disturb the registration process. The proposed method is based on fast technique using phase correlation. It consists of several steps - global correction of shift and rotation, location of landmark, their correspondences and image registration using second-order polynomial model and linear set of equations. The method was tested and evaluated from different point of views on two different image sets. The achieved registration accuracy of landmarks was 1.89 px and 0.95 px, respectively.