Abstract

The survey paper shows the application of Optical Coherence Tomography images for detection of retinopathy. Image analysis methods enormously help in distinguishing different eye ailments. Currently, determination of retinal diseases depends mostly upon optical imaging techniques. Optical coherence tomography (OCT) is a routine diagnostic imaging method used worldwide in the evaluation of retinal diseases using the cross-sectional view of the retinal layers. The primary challenge in automatic identification and analysis of retinal disease cases is the presence of speckle noise and variation across edge boundaries. Due to the complexity of retinal structures, the tediousness of manual segmentation and variation from different specialists, many methods have been proposed to aid with this analysis. Therefore, efforts are being made to improve clinical decision making based on automated analysis of OCT data which will result in improving the accuracy, precision, and computational speed of segmentation methods, as well as reducing the amount of manual interaction.


A Study on Speckle Noise Removal and Segmentation of Retinal Layers in OCT Image Analysis


Index Terms

Computer Science
Image Processing

Keywords

Optical Coherence Tomography, Retinal Layers, Image de-noising, Image Segmentation, Macular Edema