

## International Journal of Computer Science and Mobile Computing



A Monthly Journal of Computer Science and Information Technology

ISSN 2320-088X

*IJCSMC, Vol. 3, Issue. 2, February 2014, pg.689 – 695*

### **RESEARCH ARTICLE**

# Automatic Detection of Optic Disc for the Extraction of Ocular Structure

Nivedha S<sup>1</sup>, Dinesh V<sup>2</sup>  
<sup>1,2</sup>PG Scholars

<sup>1</sup>RVS College Of Engineering And Technology  
Coimbatore, Tamilnadu, India

<sup>2</sup>Rover Engineering College  
Perambalur, Tamilnadu, India

ashasugumaran20@gmail.com; veldinesh3909@gmail.com

---

#### ABSTRACT

*Nowadays, some of the most common cause of visual impairment, and blindness are because of diabetes retinopathy, hypertension, glaucoma. These diseases can be detected through regular ophthalmologic examination. However, due to population growth, the ophthalmologists and the experts needed for examination is a limiting factor. So, a system for automatic recognition of these pathological cases will provide a great benefit. Regarding this aspect, the method proposed for the detection of Optic Disc is based on mathematical morphology along with Principal Component Analysis(PCA). It makes use of different operations such as generalized distance function (GDF), the stochastic watershed, and geodesic transformations. The implemented algorithm has been validated on five public databases obtaining promising results.*

*Keywords —Generalized distance function; geodesic transformation; Optic Disc; Principal Component Analysis; Watershed transformation.*

---

Full Text: <http://www.ijcsmc.com/docs/papers/February2014/V3I2201499a30.pdf>