1006-62-250   **Ananda Bandulasiri*** (`abandulasiri@hotmail.com`), Dept. of Mathematics and Statistics, Texas Tech University, Lubbock, TX 79409, **Victor Patrangenaru**, Dept. of Mathematics and Statistics, Texas Tech University, Lubbock, TX 79409, and **Hilary Thompson**. *A statistical method for Glaucoma detection using tomographic images.*

A statistical method for Glaucoma detection using tomographic images. Mean change of the Glaucoma Index introduced by G. Derado et al. (2004) is determined using four landmarks, three on the neural rim and the other one corresponding to the maximum depth of the ONH (optic-nerve-head). Nonparametric bootstrap is used to detect the mean change of the Glaucoma Index. An angular approach to shape analysis of simplexes suggested by F. Ruymgaart is also discussed. The statistical analysis is performed on the imaging data from Louisiana State University, Eye Center. This a joint work with Victor Patrangenaru, (Texas Tech University) and Hilary W. Thompson (Louisiana State University, Eye Center). References [D] Derado, G.; Mardia, K. V.; Patrangenaru, V.; Thompson, H. W. A shapebased glaucoma index for tomographic images. J. Appl. Stat. 31 (2004), no. 10, 1241–1248. (Received February 15, 2005)