

# Abstract

**Sherin M. Youssef**

## **contourlet-based feature extraction for computer aided diagnosis of medical patterns**

the paper introduces an integrated model for monitoring diagnosis of medical patterns. the designed architecture combines contourlet transform supervised neuro-based classifier for tumor classification of liver brain tissues of medical images. a contourlet based cad model is proposed to adopt tumor diagnosis for abnormality detection in computed tomography (ct) magnetic resonance (mri) medical images by exploiting correlative information of suspicious lesions of brain liver sections. several enhancement schemes have been introduced for image fusion, noise reduction, feature extraction classification. feature extraction is adopted for inter-projective feature matching analysis. for each identified region of interest (roi), distinct sets of texture features were extracted using first order statistics, spatial gray level dependence matrix (sgld) gray level difference statistics matrix for texture description. the simulation results show the superiority of the proposed model for both ct mri images from both the visual quality the peak signal to noise ratio (psnr) points of view. the experimental results demonstrated that our proposed scheme can identify tumor regions help radiologists as a second reader in some medical images. performance comparison has been conducted between the final developed cad system other previously developed cad systems.