

# FDCT-MST based Poisson Noise Removal in Biomedical Images

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***Abstract***— Medical images have always been an important factor in diagnosis of disease. The issues of Poisson noise occurrence in medical imaging have always been a concern. Poisson noise occurs in those images due to the arrival of photons to the sensors which are independent of each other. Hence there is uncertainty in the arrival of photons which leads to Poisson noise. Poisson noises in those images have always been a problem with the image clarity. We propose a technique which combines Multi-scale variance Stabilizing Transform (MS-VST), Fast Discrete Curve let Transform (FDCT) and thresholding for effectively removing the Poisson noise from the medical images. The effectiveness of using this technique has been analyzed using peak signal to noise ratio and quality index.