Abstract

Ultrasound is a widely used medical imaging technique used for diagnostic purposes. But the major problem with these images is that they are inherently corrupted by speckle. The presence of speckle severely hampers the interpretation and analysis of medical ultrasonic images. In this paper, a comparison of various speckle reducing spatial and wavelet based methods has been carried out while de-speckling the image. These methods are evaluated and compared in terms of filter assessment parameters namely Peak Signal to Noise Ratio (PSNR), MSSIM (Mean Structural Similarity), FOM (Figure of Merit) and Method noise and consequently classified into three categories- outstanding, average and below average on the basis of their performance.

References

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Index Terms

Computer Science Image Processing
Keywords

Ultrasound image, Speckle noise, Filters, Wavelets