Abstract

This paper provides a comparative study of the performance of different Transform Domain filters like Wavelet, Contourlet, Bandelet and Curvelet with Firefly Algorithm (FA) applied to despeckle Synthetic Aperture Radar (SAR) images. Initially the feature enhancement and edge detection of speckled SAR image are integrated with improved gain function by shrinking and stretching the Wavelet Co-efficients. Then to optimize the best oriented quality parameters of the despeckled image, FA is applied. The procedure is continued for Contourlet, Bandelet and Curvelet Transforms with FA. The experimental results are compared and concluded with the best result.

References

2. Tinku Acharya, Ajoy K Ray, and Image processing: Principles and Application, Willy-
An Approach to Compare the Performance of Different Transform Domain Filters with Firefly Algorithm in Despeckling of SAR Images


**Index Terms**

Computer Science  
Signal Processing

**Keywords**

Transform Domain Filters, SAR image, Despeckling, Firefly Algorithm, ENL, PSNR.