

## Multi-Focus Image Fusion Using SFM and Wavelet Packet

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**Abstract :** In this paper, a multi-focus image fusion method using Spatial Frequency Measurements (SFM) and Wavelet Packet was proposed. The proposed fusion approach, firstly, the two fused images were transformed and decomposed into sixteen subbands using Wavelet packet. Next, each subband was partitioned into sub-blocks and each block was identified the clearer regions by using the Spatial Frequency Measurement (SFM). Finally, the recovered fused image was reconstructed by performing the Inverse Wavelet Transform. From the experimental results, it was found that the proposed method outperformed the traditional SFM based methods in terms of objective and subjective assessments.

**Keywords :** multi-focus image fusion, wavelet packet, spatial frequency measurement

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