

Seminar Title : Empirical Wavelet Transform for Image Fusion: Elevating Visual and Structural Quality
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Abstract : Multi-modal image fusion has come into recent limelight, where images from different modalities are fused, resulting in an image with more information and better visual quality. In this article, we propose a multi-modal image fusion technique utilizing Empirical Wavelet Transform, which surpasses the standard Discrete Wavelet Transform. Tested on the TNO dataset, our method demonstrates superior qualitative and quantitative performance compared to Multi-Scale Transform techniques. The fused images produced by our method are more realistic and visually rich in content, as supported by metrics like BRISQUE, Qcv, and Qcb. While DWT and SVD methods are competitive, our approach achieves better structural similarity and overall image quality, enhancing human visual perception.