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## A robust blind color image watermarking based on wavelet-tree bit host difference selection

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**Abstract:** In this paper, a blind watermarking technique based on the so called wavelet-trees is introduced. The proposed technique deals with the color pixel as one unit and exploits the significant features and relations between the color pixel components in the wavelet domain. The watermark is embedded by spreading it through the host image in such a manner that the inter-pixel robust relations carry the watermark bit sign with sufficient energy. Experimental results have shown that the proposed scheme is highly imperceptible with PSNR=41.7848.65 dB, for various watermarked images, with a capacity of 3072 bits. Also, the proposed scheme is highly resistive to various common signal processing attacks (filtration, noise, etc.). For the well known JPEG/JPEG2000 attacks, the watermark survived at a quality factor Qr1 with JPEG compression, and at compression ratios up to 500:1 with JPEG2000.