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Identification of voltage and current disturbances is an important task in power system monitoring and protection. In this paper, the application of two-dimensional wavelet transform for characterization of a wide variety range of power quality disturbances is discussed, and a new algo-rithm, based on image processing techniques is proposed for this purpose. A matrix is formed based on a specified number of cycles in such a way that the samples of voltage signal in each cycle form one row of that matrix. This matrix can be regarded as a two dimensional image. A two-dimensional wavelet transform is used to decompose the image into approximation and details, which contain low frequency and high frequency components along the rows and columns, respectively...



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