

Denoising the temperature data using wavelet transform

Abstract

Wavelets transform are effectively used in data compression and denoising such as in signal and image compression and denoising. One of the advantages of wavelets method is there exist fast algorithm in order to use wavelet for various applications. In this paper we will apply Discrete Wavelet Transform (DWT) to denoise the temperature data using symlet 16 with 32 corresponding filters (low-pass and high-pass). We apply various thresholding approaches e.g., Heuristic SURE, SURE, Minimax and Fixed-Form method. We utilized temperature data in Kuala Lumpur from January 1948 until July 2010. We also discuss the advantages of wavelet as compared with Fast Fourier Transform (FFT). Several numerical results will be presented by using Matlab.