THE ROLE OF FOURIER TRANSFORM IN SEISMIC DATA PROCESSING

By

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Abstract

The all essential Fourier transform plays a crucial role in seismic data processing, the aim of seismic data processing is to enhance the signal and minimize the noise, in order to achieve that one of the things that seismic data processing utilizes is the Fourier Transform, which converts an incoming signal of various frequencies to individual signals which have been deduced to be analyzed more readily and easily.

An introduction to the basic nomenclature and the terms used in seismic data processing have also been discussed along with the basic signal theory.

In the following literature Matlab is used as a medium to explain the Fourier transform along with a few case studies of spectral decomposition and seismic data interpolation which highlight the functioning of the Fourier analysis, Fourier synthesis and the Fourier transform.

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