

NEURONAL NETWORK-BASED SPECTRA ANALYZER

Description:

The distance from sinusoidal conditions in the electrical power distribution network has led to a growing interest in the search for methods for measuring electrical power quantities that provide high precision. Furthermore, there is no background on the use of neural networks to perform the precise spectral analysis of sinusoidal signals and to obtain an estimate of the fundamental frequency of the signal under analysis. On the other hand, regarding the problem of spectral analysis of periodic signals, there are multiple inventions in this regard, but none of them with the precision and versatility of the present invention. Thus, the present invention introduces a novel solution to the problem of performing spectral analysis of periodic signals, and in particular, a method and apparatus for determining the harmonic content of, for example, the waveform of the mains voltage in a system. of electric power distribution.

Keywords:

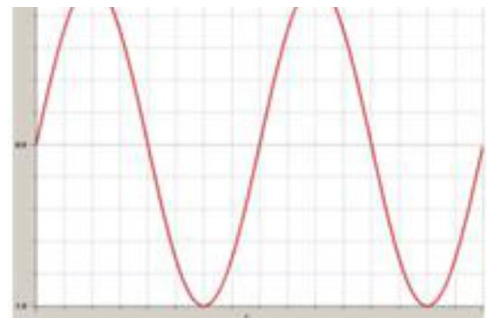
[Spectral Analysis](#), [System](#), [Neural Networks](#), [Sinusoidal Signals](#)

Sectors:

[ICT](#), [Electronics](#), [Engineering](#)

Areas:

[Electronics](#), [Equipment](#)



Advantages:

Among the advantages of the present invention are: • Eliminates the need for synchronization of other pre-existing methods, such as limitation in execution time and dependence on the phase of the sampled signal that other methods employ. • The behavior of the neural network does not depend on the phase of the signal under analysis and does not require synchronous sampling to achieve accurate results.

Uses and Applications:

The present invention is applicable in all those cases in which a precise spectral analysis is required and a flexible system is desired.

Patent Number: ES2329855

Applicants: Universidad De Málaga

Inventors: José Ramón Salinas Vázquez, Francisco Garcia Lagos, Francisco Sandoval Hernandez

Filing Date: 14/02/2007

Protection Level: National (Spain)

Processing Status: Spanish patent