## Wavelet Based Signal Processing for Fault Location in Airplane Cable

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**Abstract :** Wavelet analysis is an exciting method for solving difficult problems in mathematics, physics, and engineering, with modern applications as diverse as wave propagation, data compression, signal processing, image processing, pattern recognition, etc. Wavelets allow complex information such as signals, images and patterns to be decomposed into elementary forms at different positions and scales and subsequently reconstructed with high precision. In this paper a wavelet-based signal processing algorithm for airplane cable fault location is proposed. An orthogonal discrete wavelet decomposition and reconstruction algorithm is used to eliminate the noise in the aircraft cable fault signal. The experiment result has shown that the character of emission pulse and reflect pulse used to test the aircraft cable fault point are reserved and the high-frequency noise are eliminated by means of the proposed algorithm in this paper.

**Keywords :** wavelet analysis, signal processing, orthogonal discrete wavelet, noise, aircraft cable fault signal **Conference Title :** ICSRD 2020 : International Conference on Scientific Research and Development

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