An Approach for obtaining Least Noisy Signal using Kaiser Window and Genetic Algorithm

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Authors:

Poulami Das, Subhas Chandra Panja, Sudip Kumar Naskar, Sankar Narayan Patra

Abstract

During transmission via any media signals get affected by unwanted components; which is adverse but inevitable. Elimination of such unwanted components termed as noise from transmitted signals persisted important as well as puzzling task for the researchers from the initial days of Digital Signal Processing. Among a significant number of techniques proposed for removal of noise from signals, use of digital filters has become most effectual in multiple ways. Slighter overheads in designing and lower hardware cost have made the Finite Impulse Response (FIR) filters popular. FIR filter is expansively used in video convolution functions, signal preconditioning, and various communication applications. Till date, most of the FIR filter designing techniques is based on Window method, Optimal Sampling Method, Frequency Sampling Method. In this paper a new subterfuge based on Genetic Operators and Kaiser Window function has been proposed to obtain the least noisy signal from a set of filtered signals of a corrupted audio signal.
References


Index Terms

Computer Science          Algorithms
Keywords

Finite Impulse Response Filter, Roulette wheel selection technique, Kaiser Window, Genetic Algorithm, offspring, Signal to Noise Ratio (SNR), Beta Factor.