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3.5. The fast Fourier transform for a time/frequency/energy representation of a non-stationary signal

Sommario/riassunto

Dealing with digital filtering methods for 1-D and 2-D signals, this book provides the theoretical background in signal processing, covering topics such as the z-transform, Shannon sampling theorem and fast Fourier transform. An entire chapter is devoted to the design of time-continuous filters which provides a useful preliminary step for analog-to-digital filter conversion.Attention is also given to the main methods of designing finite impulse response (FIR) and infinite impulse response (IIR) filters. Bi-dimensional digital filtering (image filtering) is investigated and a study on stabi