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Sommario/riassunto

Solution implementations for digital filter design and analysis using MATLABA professional engineer charged with designing digital filters for sophisticated electronic devices needs more than design theory to get the job done. It is also essential to have practical guidance in how to characterize a digital filter, choose among a vast number of filter design options available in MATLAB and other software, make proper design choices, and enhance a computer-generated design into the optimal filter for a target application. In addition, it is important to develop skills that make it possible to take full advantage of MATLAB's implementation support.Digital Filters delivers both the theoretical and practical knowledge needed to design, implement, and analyze digital filters using MATLAB. It covers:. Sampling, data acquisition, data conversion and quantization, and transforms. Finite impulse response (FIR) filter attributes, types, special cases, and implementation. Infinite impulse response (IIR) filter attributes, types, special cases, and implementation. State variables as an IIR architectural description language. Multi-rate digital filter systems properties and case studiesEach topic in Digital Filters is supported with numerous examples, many involving the use of MATLAB. The MATLAB scripts used to generate these examples and graphics are available from an accompanying website. These scripts can be easily copied and pasted into MATLAB's Command Window and re-parameterized to reflect specific digital filter applications and needs.