
TÉCNICAS DE AQUISIÇÃO E PROCESSAMENTO DE SINAIS

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Introduction to Digital Filters

- 1- Evaluate the response of a FIR and IIR filters applied to a 100 Hz signal sampled at 2 kHz. Evaluate the phase and cut-off frequency for the -3dB level. Use the USB 6009 acquisition system. Compare the results with that expected from the filters impulse response.
- 2- Apply a filter to the simulated signal from experiment 1 (convolution and cross-correlation) with signal to noise ratio (SNR) of 5dB and 10 dB. Use the Moving Average and Butterwoth (order 5) filters. Evaluate the SNR and power spectrum of the signals before and after applying the filter.
- 3- How did the filters affect the signals phase in each case?