

9.1.1 FIR or IIR filters?

- When reasonable modeling capabilities are important owing a minimum number of parameters, adaptive IIR filters should be considered. Typical example: adaptive notch filters.
- Although high speed applications (example: XDSL) require more elaborated models (i.e., IIR), also DSP capability is growing dramatically (brute force, but easier, solutions are at hand!).
- If the number of extremes to be approximated is high (example: modeling a complex acoustical echo chamber), high computational savings can not be expected!
- When IIR are indicated, other criterion or combination of criteria can be useful (example, extension of BRLE idea to SM).
- Another interesting alternative related to the previous point is the Master-Slave algorithm (and extension to SM).
- A general, global, universal solution to the problem of adaptive filtering can not be expected. Instead, a deep study of the specific application generally leads to a specific and suitable algorithm (example of this is the ADPCM standard).