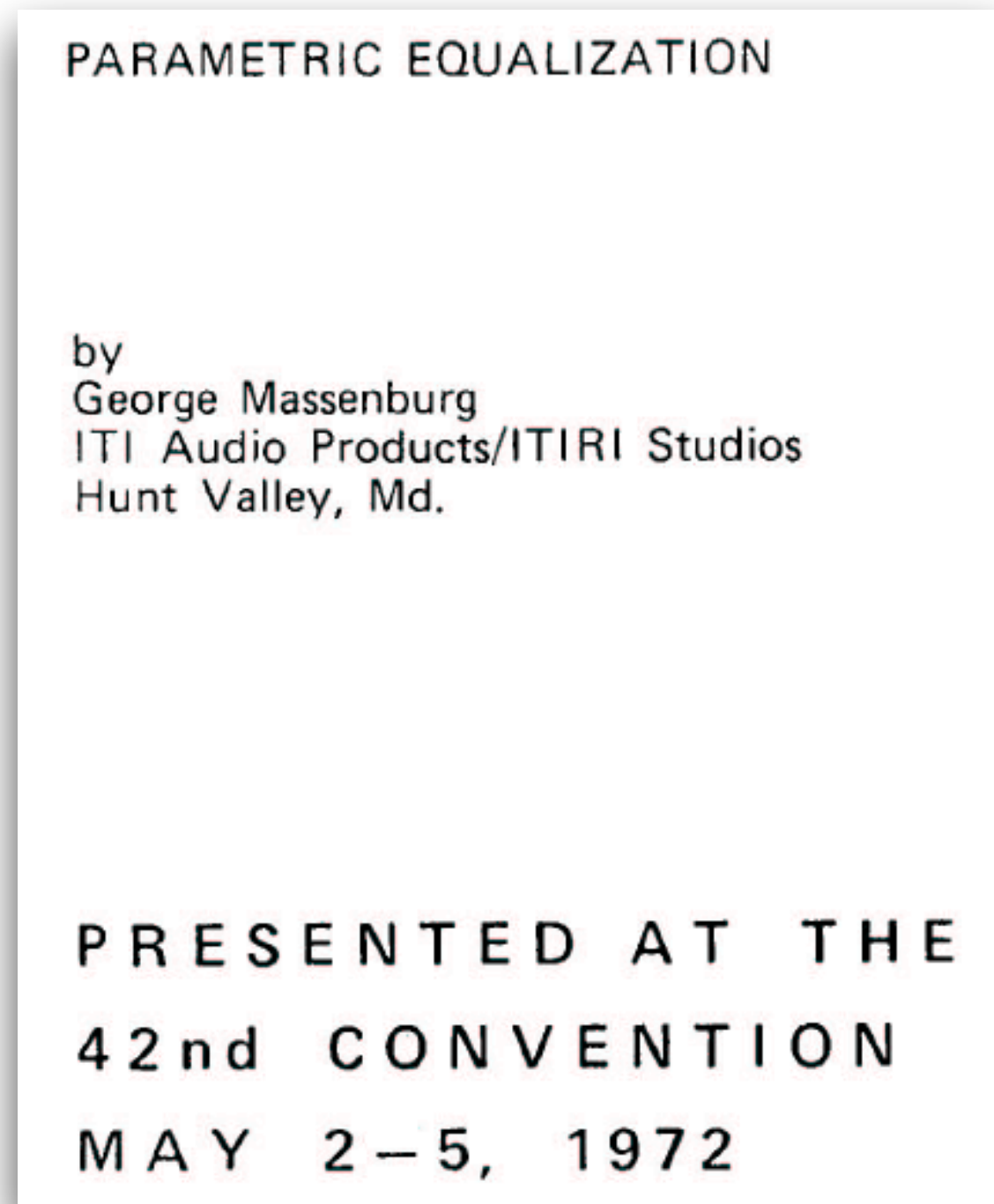
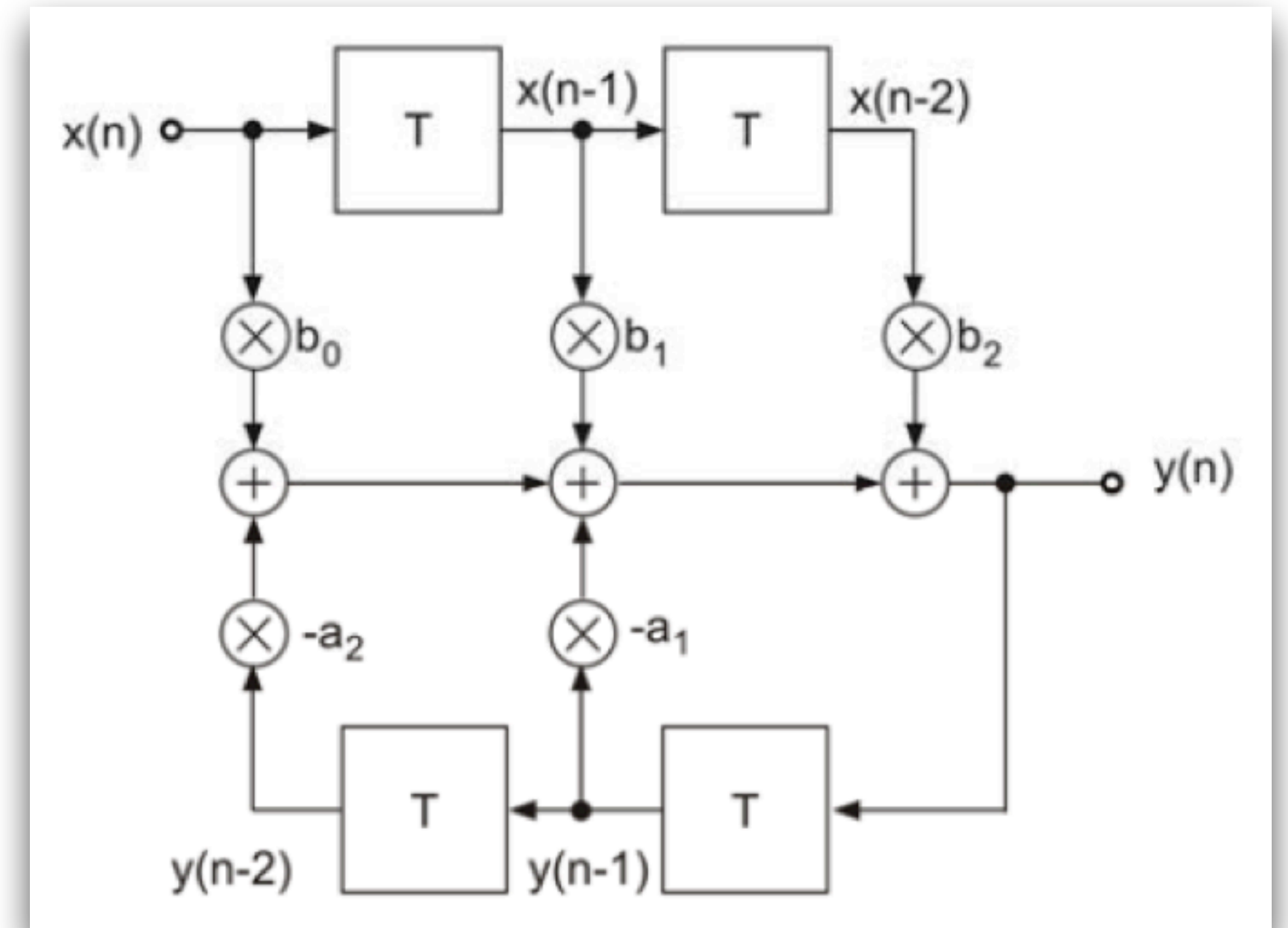


# Parametric EQ - Design



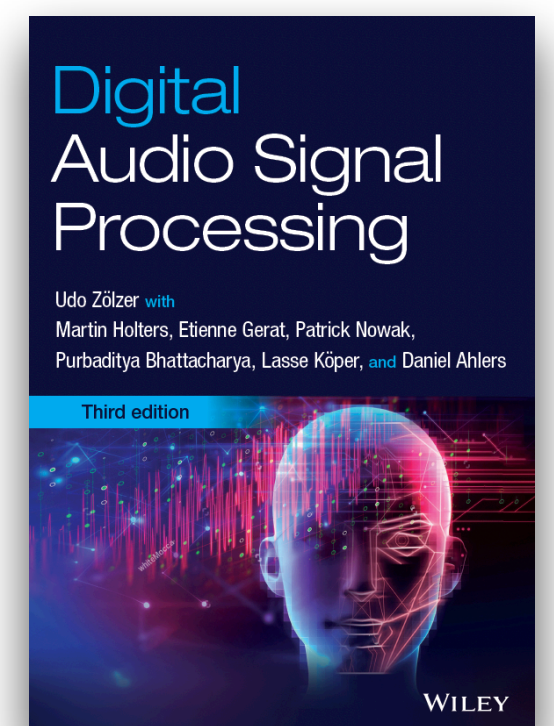
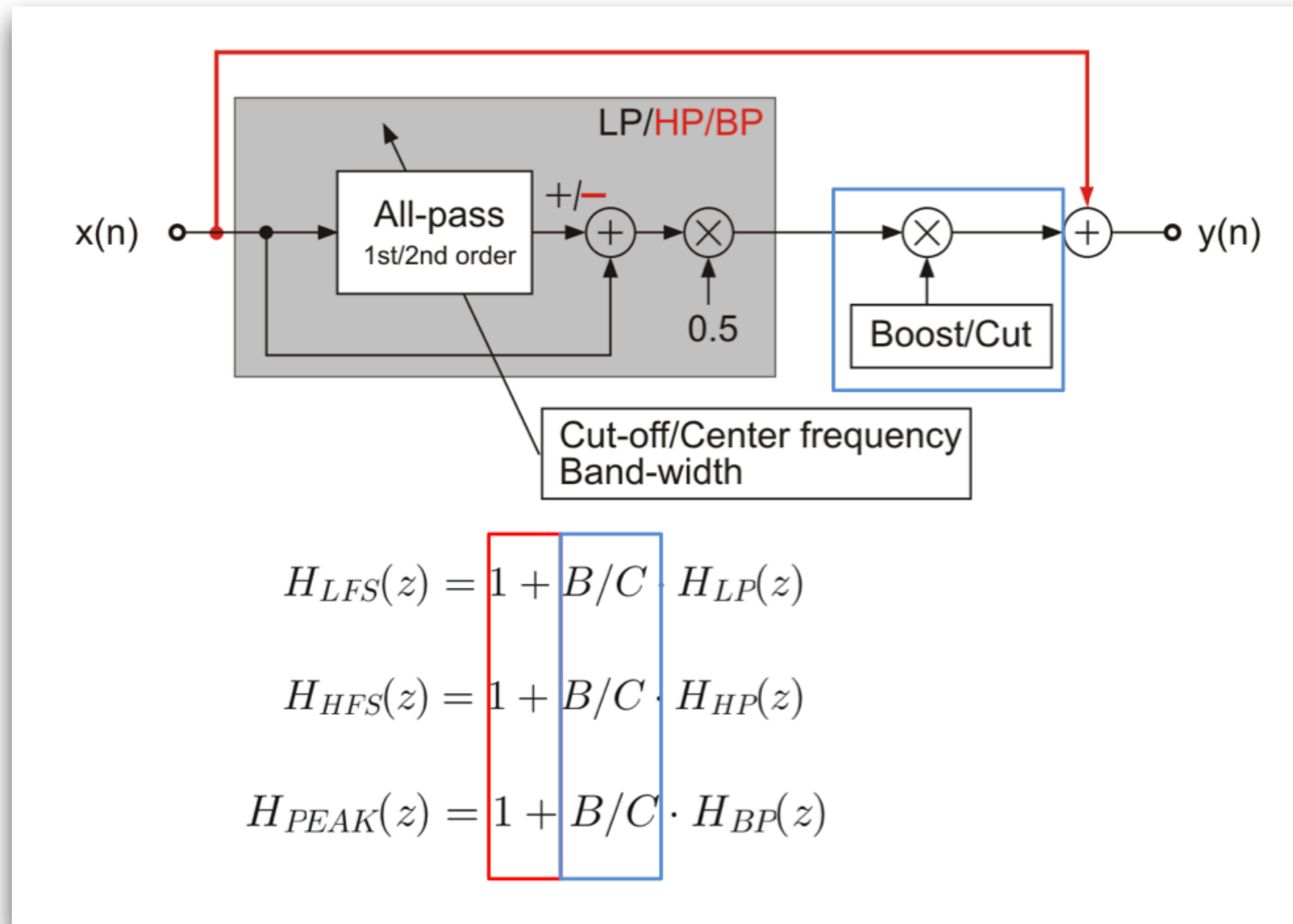
$H(s) \longleftrightarrow H(z)$   
bilinear transform



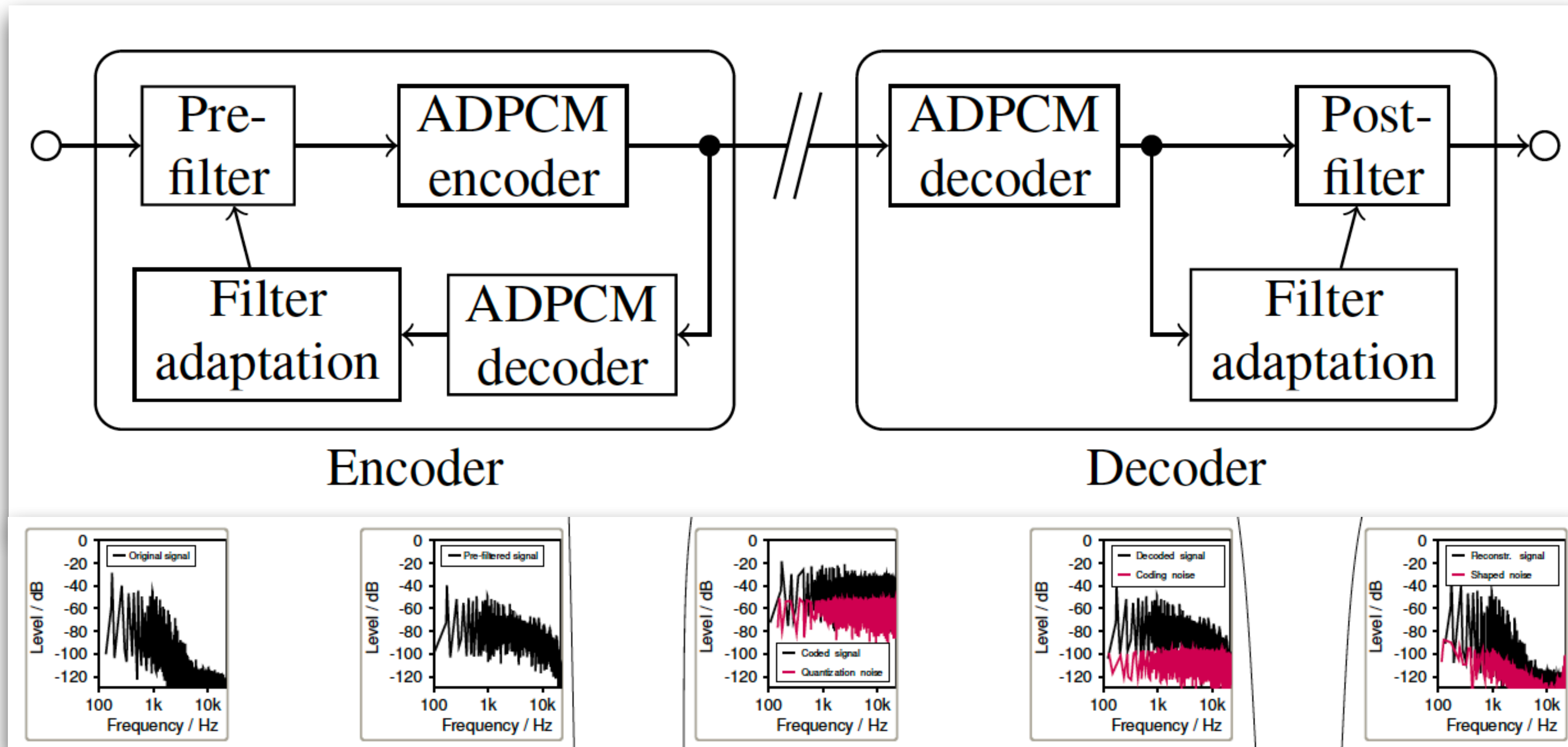
analog filter topology

digital filter topology

# Parametric EQ - Allpass Design

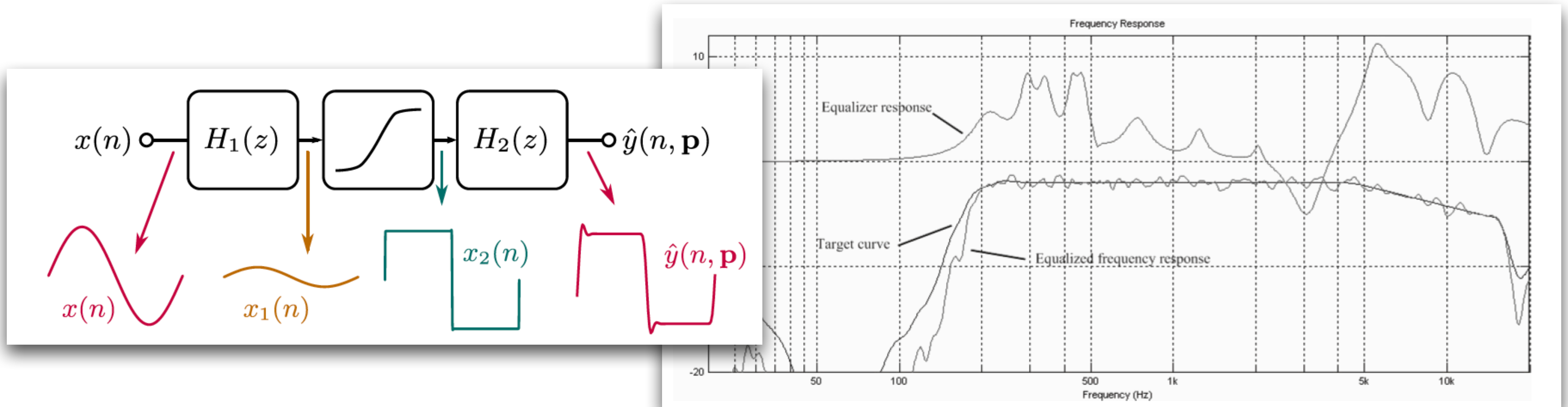


# Delay-free Audio Coding



M. Holters, U. Zölzer, „Delay-free Lossy Audio Coding Using Shelving Pre- and Post-filters,“ ICASSP, 2008, Las Vegas

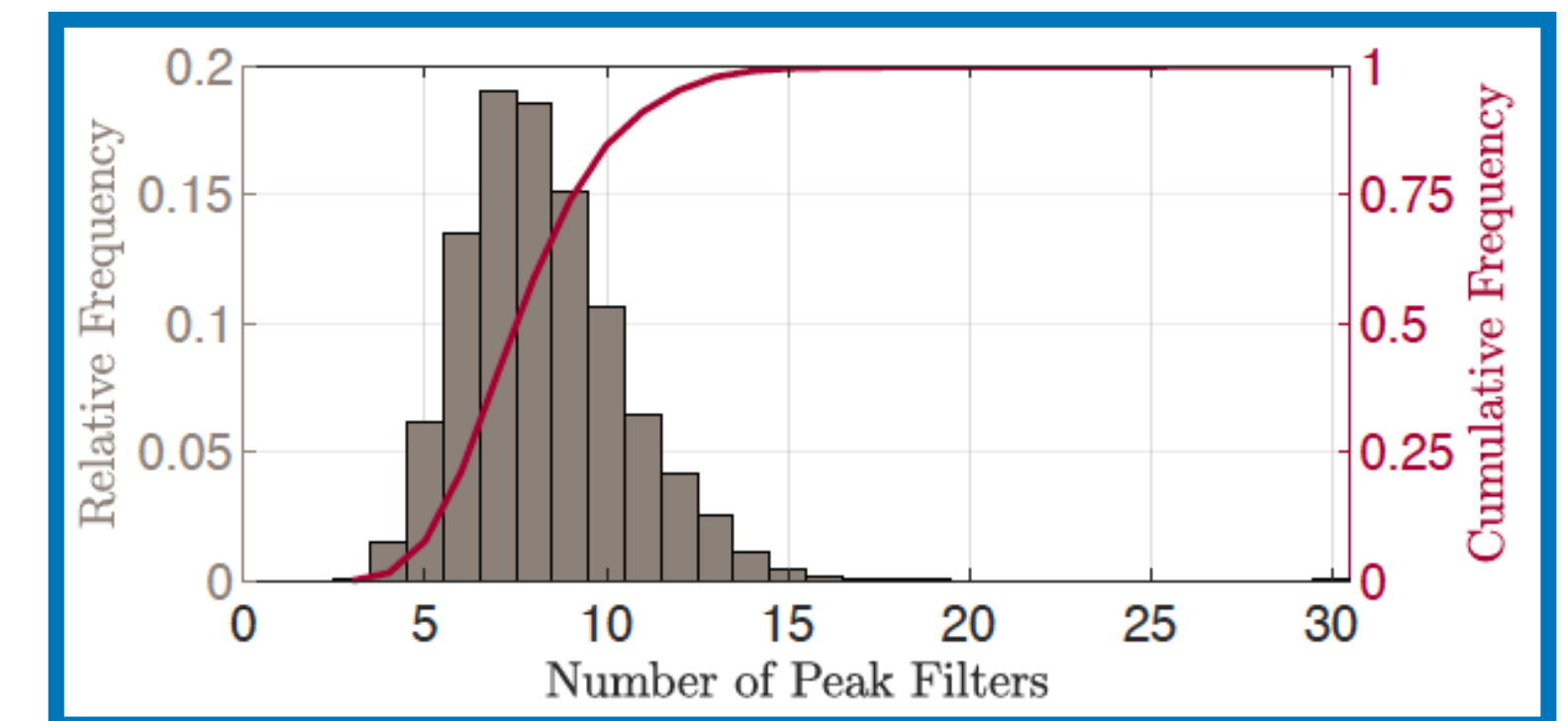
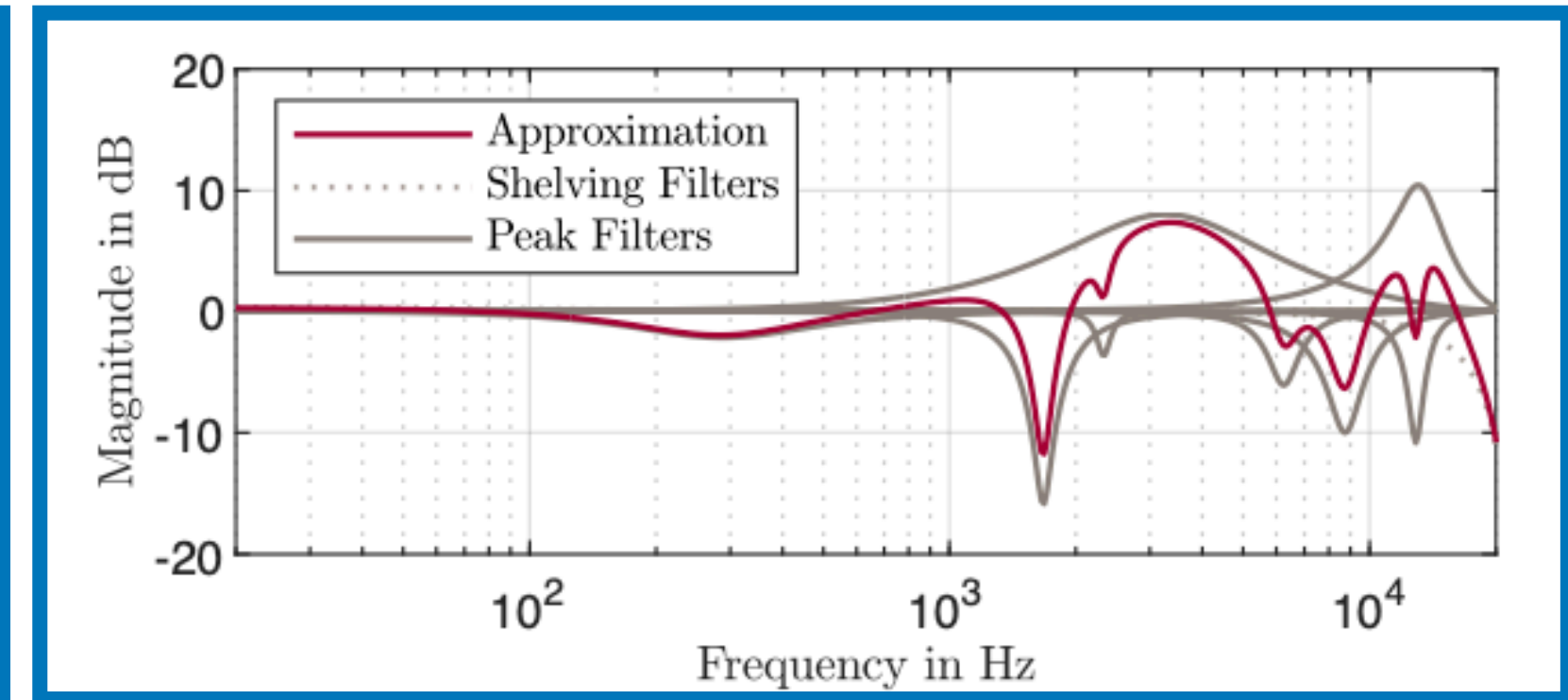
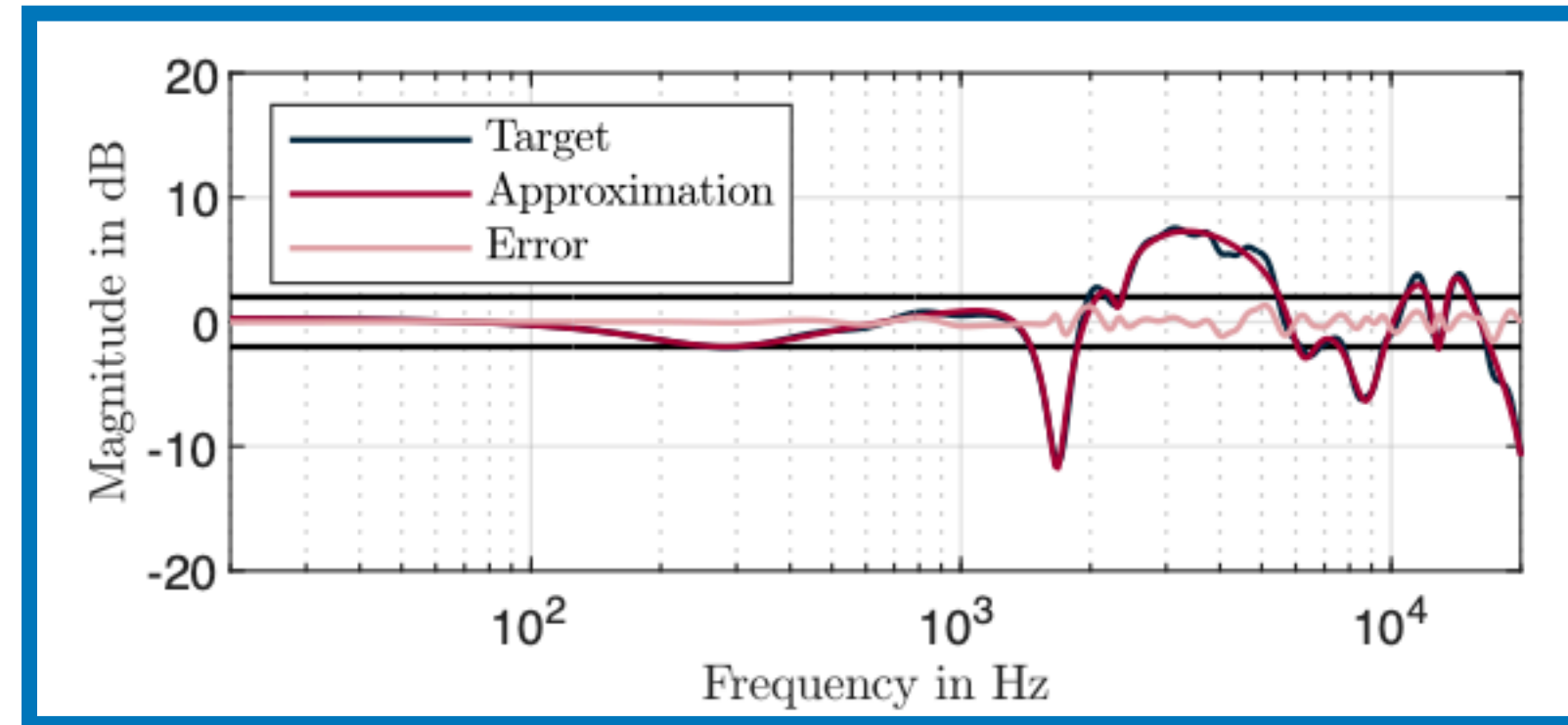
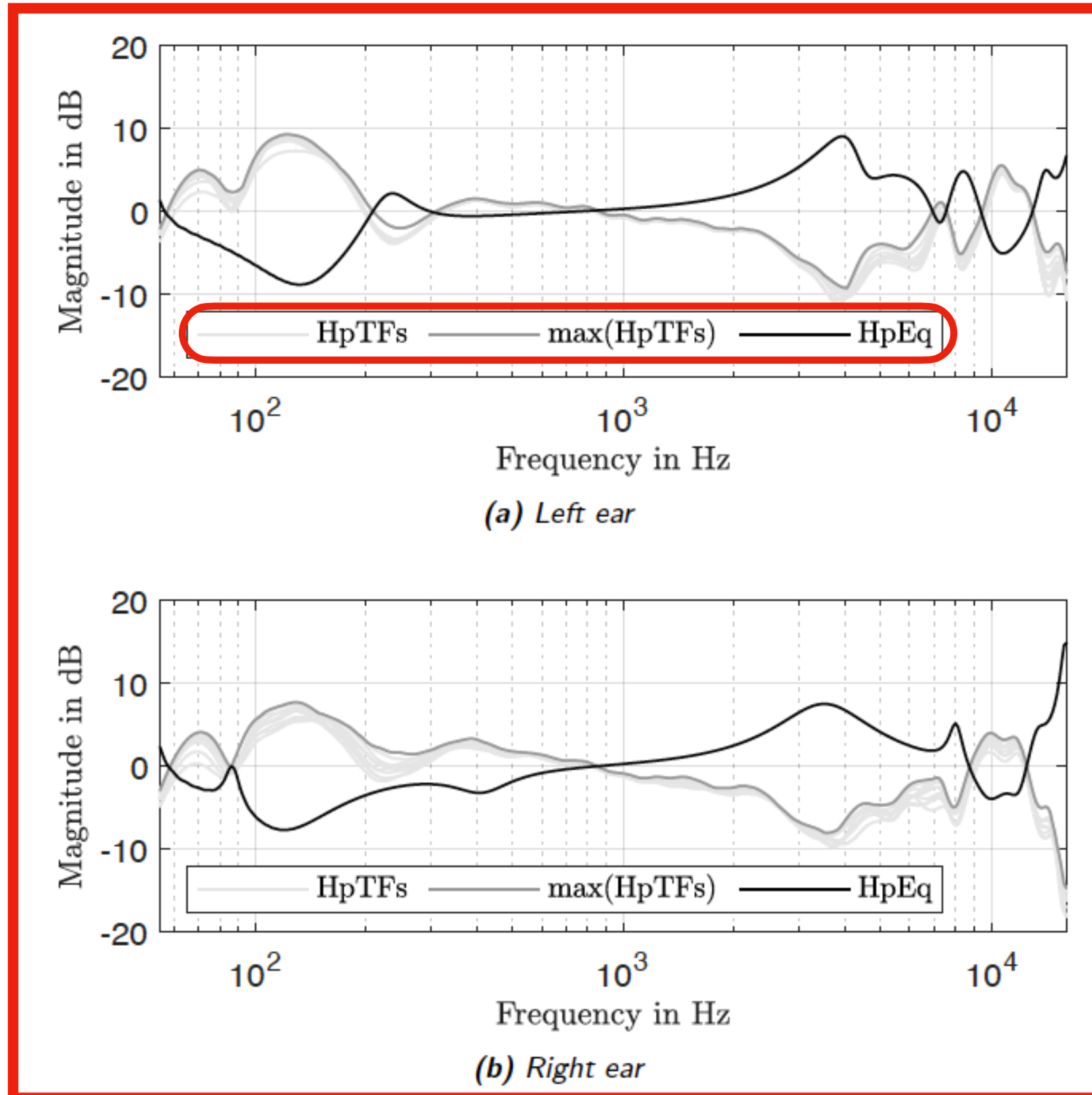
# Amp/Loudspeaker Modeling



F. Eichas, and U. Zölzer, „Gray-Box Modeling of Guitar Amplifiers," [JAES Vol 66, No 12 pp. 1006-1015; December 2018](#)

H. Behrends et.al., „Automatic Equalization Using Parametric IIR Filters," [JAES Vol 59, No 3, pp. 102-109; March 2011](#)

# Headphone and HRTF



P. Nowak, [Spatial Audio Through Headphones Based on HRTFs Approximated by Parametric IIR Filters](#), Diss 2022

P. Nowak et.al., [Automatic Approximation of Head-Related Transfer Functions Using Parametric IIR Filters](#), DAGA 2020