

Figure 1: AF-RLS algorithm: (a) average tap-weight tracks for the AF-RLS algorithm for different adaptive memory learning parameters  $\rho$ , (b) learning curves of the AF-RLS algorithm for different learning parameters  $\rho$ , and (c) adaptive memory factor  $\lambda[n]$  for two different learning rates of  $\rho = 10^{-4}$  and  $\rho = 5 * 10^{-5}$ . Learning curve results were obtained by averaging over 250 iterations. Note that for  $\rho = 10^{-3}$ , there is loss of tracking in the MSE learning curves. While there is no significant difference in the MSE curves, the learning rate of the memory factor update controls the rate of change of the memory factor and causes the tap-weight iterations to converge faster or slower.