Mário Marques da Silva, Rui Dinis, Américo Correia, "Iterative Frequency-Domain Receivers for STBC Schemes" – 2009 IEEE 70th Vehicular Technology Conference 2009 (VTC2009 - Fall), Anchorage, USA, September 2009.

Abstract: In this paper, we consider iterative frequencydomain receivers for block transmission techniques with rate-1 Space Time Block Coding (STBC) for two or four transmit antennas. We consider both Orthogonal Frequency Division Multiplexing (OFDM) and SingleCarrier (SC) schemes. Since our STBC with 4 transmit antennas is not orthogonal, our receiver includes the cancellation of the residual interference, allowing performances close to the ones of an orthogonal code. Our performance results show that combining STBC with block transmission schemes allows excellent performances, even for channels with small multipath diversity.