Trade-Off Between Complexity and BER Performance of a Polynomial SVD-Based Broadband MIMO Transceiver

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Abstract

In this paper we investigate non-linear precoding solutions for the problem of broadband multiple-input multiple output (MIMO) systems. Based on a polynomial singular value decomposition (PSVD) we can decouple a broadband MIMO channel into independent dispersive spectrally majorised single-input single-output (SISO) subchannels. In this contribution, the focus of our work is to explore the influence of approximations on the PSVD, and the performance degradation that can be expected as a result.

27th National Radio Science Conference, NRSC 2010 - 2010, March