Level Crossing Rates in Transmit Beamforming Systems

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References:

Abstract:
In this paper, the second-order statistics of the signal to noise ratio (SNR) at the output of a multiple-inputmultiple-output (MIMO) system employing maximal ratio combining (MRC) are analyzed. Exact expressions for the level crossing rate (LCR) and the average fade duration (AFD) are derived for the Rayleigh propagation and arbitrary channel matrix dimensions. The analytical results are validated by simulation.

Keywords:
level crossing rate, beamforming, Average fade duration, multiple-input multiple-output channels, Rayleigh fading.