

Mário Marques da Silva, Américo Correia, "Interference Cancellation using joint Pre-distortion filtering and Selective Transmit Diversity", 4th Conference on Telecommunications, Aveiro, Portugal, 18-20 June 2003;

Abstract: In this paper we present and evaluate a pre-distortion (PD) scheme for the downlink of Wideband-code division multiple access (W-CDMA) systems considering a Rake in the receiver in order to exploit multipath diversity. Its performance is compared with schemes without the PD at the base station (BS), and combined with a transmit diversity (TD) scheme to improve the performance by exploiting spatial diversity. It is shown that the proposed PD scheme allows receivers (Mobile Stations) with very low complexity, contrarily to the case where a post-processing multi-user detector (MUD) approach is adopted to improve the performance. Therefore, the proposed PD scheme can be seen as an alternative to post-processing schemes.