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A Robust Derivative Constrained Receiver for MC-CDMA Systems

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Abstract

In this letter, a derivative constraint minimum output energy (MOE) receiver is proposed the offers enhanced robustness against carrier frequency offset (CFO). A theoretical analysis of the output signal-to-interference-plus-noise ratio (SINR) is presented to confirm its efficacy. Numerical results demonstrate that the proposed receiver basically offers the same performance as an optimal receiver with no CFO present.

Key words：Multi-carrier code division multiple access (MC-CDMA); Carrier frequency offset (CFO); Derivative constrained; Minimum output energy(MOE) receiver