# Abstract

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## On Joint Antenna ion in MIMO Systems under Spatial Correlated Fading

This paper proposes a framework for the analysis of joint antenna ion (JAS) strategies at both link ends. Two ion criteria which exploit the exact and statistical channel knowledge are presented. We demonstrate through extensive simulations that joint antenna ion is a promising antenna ion strategy that captures most of the capacity benefits of MIMO system, shrinks the hardware requirements and the processing time, and reduces the harmful effect of correlated fading. We also show that the capacity associated with JAS is higher than the system employing receive antenna ion only. This is achieved in i.i.d. and correlated MIMO channels.