

عنوان مقاله:

multiple antenna relay beamforming for wireless peer to peer communications

محل انتشار:

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خلاصه مقاله:

This paper deals with optimal beamforming in wireless multiple-input-multiple-output (MIMO) relay networks that involves multiple concurrent source-destination pairs with imperfect channel state information (CSI) at the relays. Our aim is the optimization of the MIMO relay weights that minimize the total relay transmit power subject to signal-to-interference-plus-noise ratio (SINR) of all destinations to be kept above a certain threshold. Since power minimization is a non-convex quadratically constrained quadratic programming (QCQP), we use semi-definite programming (SDP) relaxation of above mentioned problem by using a randomization technique. Numerical Monte Carlo simulations verify the performance gain of our proposed multiple antenna relay system in terms of transmit power and symbol error probability

کلمات کلیدی:

MIMO-Relay Networks, Power Allocation, Beamforming, Semi-Definite Programming

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