

عنوان مقاله:

An Effective Cooperative Cognitive Radio System for Correlated Channels

محل انتشار:

بیست و یکمین کنفرانس مهندسی برق ایران (سال: 1392)

تعداد صفحات اصل مقاله: 6

نویسندگان:

Mehdi Ghamari Adian - Amirkabir University of Technology

Hassan Aghaeinia

خلاصه مقاله:

An effective cooperative cognitive radio based communication system is proposed, when the wireless channels are highly correlated. The system model consists of two multiantennasecondary users (SU TX and SU RX), constituting the desired link and some single-antenna primary and secondaryusers. The objective is the maximization of the achievable data rates of the desired multiple-antenna SU link subject to the interference constraints on the primary users. An effective system, exploiting Transmit Beamforming (TB) at SU TX, cooperation of some single-antenna SUs and the antennaselection at SU RX to reduce the costs associated with RF-chains at the radio front end at SU RX, is proposed. Due to the issue ofMIMO channels with correlated fading, some problems arise such as inapplicability of the well-known Grassmanian Beamforming as TB scheme at SU TX. We then propose amethod to overcome this problem. After formulating the problem, a novel iterative scheme is proposed to find the best TBweight vector in SU TX and best subset of antennas at SU RX, considering the correlated channel

کلمات کلیدی:

لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/208371>

