

عنوان مقاله:

Opportunistic Spectrum Leasing in Cooperative Cognitive Radio Networks

محل انتشار:

بیستمین کنفرانس مهندسی برق ایران (سال: 1391)

تعداد صفحات اصل مقاله: 6

نویسندگان:

Mehdi Ghamari Adian - *Amirkabir University of Technology*

Hassan Aghaeinia

خلاصه مقاله:

Spectrum leasing issue is investigated by an opportunistic cooperative approach. The scenario includes a multi-antenna primary user (working as a Base Station) and a number of single-antenna primary and cognitive radio users (CR users). The core aim of the paper is to maximize the data rate in the downlink, from base station (PU BS) to the desired primary user (PU RX), taking advantage of the cooperation of opportunistically selected CR users. Cooperating CR users will enjoy the benefits of transmitting to their intended CR receivers in a portion of time, allocated by PU BS. The main contribution of this work is proposing the opportunistic cooperative approach. Meanwhile the interference imposed on other PUs, due to cooperation of selected CR users, is removed. Moreover, as the opportunistically selected CR users form a virtual antenna array, it becomes feasible to utilize zero-forcing beamforming to remove the interference on other PUs

کلمات کلیدی:

Opportunistic Spectrum Leasing; Cognitive Radio Networks; Cooperative Communications; Stackelberg Games

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