

عنوان مقاله:

Attack-Aware Cooperative Spectrum Sensing in Cognitive Radio Networks under Byzantine Attack

محل انتشار:

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خلاصه مقاله:

Cooperative Spectrum Sensing (CSS) is an effective approach to overcome the impact of multi-path fading and shadowing issues. The reliability of CSS can be severely degraded under Byzantine attack, which may be caused by either malfunctioning sensing terminals or malicious nodes. Almost, the previous studies have not analyzed and considered the attack in their models. The present study introduces a new issue named attack-aware CSS where the objective is to analyze the occurred attack against CR ad hoc network to ameliorate the performance of data fusion schemes. The novelty includes the modification of Weighted Sequential Probability Ratio Test (WSPRT) algorithm which resulted in Attack-Aware WSPRT (A2WSPRT). The findings indicated considerable reduction in cooperation overhead and enhancement in correct sensing ratio, especially in severe attacks.

کلمات کلیدی:

Attack-aware, Byzantine attack, Cognitive Radio (CR), Cooperative Spectrum Sensing (CSS), SSDF Attack

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