Wide-Band Cooperative Compressive Spectrum Sensing for Cognitive Radio Systems Using Distributed Sensing Matrix

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Abstract:

Abstract—In this paper, cooperative compressive spectrum sensing is considered to enable accurate sensing of the wide-band spectrum. The proposed algorithm is based on compressive sensing theory and aims to reduce the hardware complexity of the cognitive radio receiver by distributing the sensing work among groups of sensing nodes. The proposed algorithm classifies the cooperated sensing nodes into different sensing groups depending on the quality of the reporting channel between the sensing node and the ...

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