

229. ENHANCING SECURITY RATES ON COGNITIVE RADIO NETWORKS USING COOPERATIVE SECURE RESOURCE ALLOCATION

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A secure communication in cognitive radio networks, where the secondary users are allowed to access the spectrum of the primary users as long as they preserve the secure communication of PU in the presence of malicious eavesdroppers. The secondary users will use the two hops in which the secondary user will act as a relay set and the friendly jammer for the primary user and the eavesdroppers. I use the digital signature algorithm for wireless system and optimize the power allocation, time allocation and relay selection problems. I also provide an intrusion detection system to detect the users who act as a false transmitter or receiver. The power allocation problem can be transformed into

Index Terms—Cognitive radio networks, ergodic and instantaneous resource allocation, generalized geometric programming (GPP), secure communication.

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